

**STATE OF CALIFORNIA**  
**ENERGY RESOURCES CONSERVATION**  
**AND DEVELOPMENT COMMISSION**

In the Matter of:

The Calico Solar Project  
Amendment

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DOCKET NO. 08-AFC-13C

**BNSF RAILWAY COMPANY'S**  
**BRIEF REGARDING JURISDICTION AND BASELINE**

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For BNSF Railway Company

## **1. INTRODUCTION**

BNSF Railway Company ("BNSF") hereby submits its brief addressing the jurisdictional and baseline issues pursuant to the Committee Scheduling, Briefing, and Procedures Order, dated May 2, 2011 ("Scheduling Order"), issued by the Siting Committee of the California Energy Commission ("CEC") overseeing the Calico Solar Amendment. The Scheduling Order requested briefing on the following issues:

### **1. Commission Jurisdiction.**

- a. Does the Energy Commission have authority to consider approval of the proposal to reduce electricity generated from Sun Catcher solar thermal technology from 663.5 MW to 100.5 MW?
- b. Does the Energy Commission have authority to consider approval of the proposal to install photovoltaic (PV) facilities generating 563 MW on the Calico Solar Project site? If so, explain whether this is because 1) the PV facilities are part of a thermal power plant; 2) the PV facilities are either a related or appurtenant facility; or 3) the PV facilities are located on a site the CEC has licensed. Are there other grounds for the Energy Commission authority to consider approval of the project amendments? If so, please specify what that authority is and how it applies to the proposal.
- c. May the Energy Commission act as the lead agency to perform the required CEQA evaluation over both the solar thermal and photovoltaic components of the proposed project modifications? Are there any legal impediments to such an approach?
- d. In the Energy Commission's consideration of the proposed amendment to its permit, what are the Energy Commission's

responsibilities under CEQA with respect to the proposal to install PV facilities?

- e. Are there any other considerations relevant to the Energy Commission's jurisdiction with respect to the proposal?

**2. Baseline of Environmental Conditions.**

- a. What is the appropriate baseline on environmental conditions on which to base the Energy Commission's CEQA analysis, and why?
- b. Are any of the conditions identified in CEQA Guidelines section 15162 present? If so, what are they, and which portions of the Energy Commission's December 2010 Calico Solar Project decision would the Commission be required to re-evaluate?

**2. BACKGROUND AND PROCEDURAL HISTORY**

The Siting Committee is overseeing Calico Solar's Petition to Amend the CEC's Certification issued regarding the Calico Solar Project, 08-AFC-013. The amendment process is presently being overseen by the Compliance group of the CEC and has been designated as 08-AFC-013C. The CEC issued the certification decision on December 1, 2010 (the "Commission Decision").

Since that time, Calico Solar has not complied with numerous conditions contained in the December 1, 2010 certification, including but not limited to the performance of studies, reports and plans and the construction of Phase 1a.

On March 22, 2011, Calico Solar filed its Petition to Amend. During the certification process, the proposed project was reduced in size several times, from 850MW and 8,230 acres, to 850 MW and 6,215 acres, to 663.5MW and 4,613 acres (the "Initial Project").

The Initial Project is situated immediately north and/or south of

BNSF's mainline for approximately five miles. BNSF's mainline is a critical transcontinental artery for interstate commerce. It is double tracked and supports both passenger and freight trains. On this segment of the BNSF mainline, passenger trains run at speeds of up to 90mph; freight trains run at speeds of up to 70mph on the mainline. Up to 90 trains a day, some extending for well over a mile in length, run on BNSF's mainline.

The Petition to Amend proposes to amend the Commission Decision by:

- (1) switching from 100% SunCatcher technology<sup>1</sup> to at least 85% solar photovoltaic technology ("PV")<sup>2</sup>;
- (2) changing the phasing of the project to allow for:
  - a. the first emplacement of solar technology to be PV south of the BNSF mainline, instead of SunCatchers north of the BNSF mainline, as provided for in the Initial Project;
  - b. moving the main services complex south of the BNSF mainline, instead of north of the BNSF mainline, as provided for in the Initial Project;

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<sup>1</sup> A SunCatcher is a 38-foot mirrored dish that sits atop a 40-foot high, two-foot diameter pedestal. The mirror focuses sunlight on a Stirling engine. The focused sunlight heats hydrogen gas, which in turn powers the engine and converts mechanical energy into electricity.

<sup>2</sup> Unlike SunCatchers, photovoltaic panels do not convert mechanical energy into electricity. Rather, they are arrayed in cells or panels which generate electrical power by converting solar radiation into direct current electricity using semiconductors that exhibit the photovoltaic effect. Photovoltaic power generation employs solar panels composed of a number of cells containing a photovoltaic material. Materials presently used for photovoltaics include monocrystalline silicon, polycrystalline silicon, amorphous silicon, cadmium telluride, and copper indium selenide/sulfide. Cadmium telluride is toxic if ingested, if its dust is inhaled, or if it is handled improperly (i.e. without appropriate gloves and other safety precautions). *Nomination of Cadmium Telluride to the National Toxicology Program*. United States Department of Health and Human Services. 2003-04-11.

- c. moving the substation south of the BNSF mainline, instead of north of the BNSF mainline, as provided for in the Initial Project; and
  - d. moving construction of the permanent grade separation over the BNSF trackage into the second phase.
- (3) adding a waterline running from north of the BNSF mainline, under the BNSF mainline, and south to the relocated main services complex;
  - (4) deleting numerous Conditions of Certification, including the funding of the BNSF hydrology study; and
  - (5) requiring a glare and glint study.

Less than a month after the Commission Decision, Tessera Solar, Inc. ("Tessera"), the sole owner of Calico Solar, LLC, announced that it had sold Calico Solar, LLC to K-Road Power. Approximately three months later, Calico Solar filed its Petition to Amend. A few days later, Calico Solar filed a similar request to amend the Right of Way ("ROW")<sup>3</sup> issued by the Department of the Interior, Bureau of Land Management ("BLM").

During the public information hearing on April 20, 2011, a Calico Solar representative stated that the sale was in large part related to the financial problems experienced by Tessera and its affiliated company Stirling Energy Systems ("SES"), which manufactures SunCatchers. Long before that,

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<sup>3</sup> The BLM issued the ROW, attached hereto as Exhibit C, in October 2010. The ROW confers the requisite right to use the BLM property to Calico Solar. The ROW is based on and is contingent on the analyzed SunCatcher technology and incorporates the CEC's Conditions of Certification set forth in the Commission Decision. No groundbreaking activity can occur on the project site until and unless the BLM issues a Notice to Proceed. Presently, there is no Notice to Proceed. In fact, the BLM has issued two separate Notices of Intent to Terminate the ROW for failure to comply with the terms of the ROW, on February 24 and April 28, 2011. These Notices of Intent are attached hereto as Exhibits D and E, respectively.

however, Tessera was aware that SunCatchers would not be commercially available to meet the requirements of the Initial Project. By at least late September to early October 2010, Tessera Solar was looking to sell Calico Solar and what was then the proposed project. Tessera knew it could not manufacture and make SunCatchers available for emplacement within the proposed project, within the time schedule set forth in the proposed project.

Dan O'Shea, who is currently the "Vice President"<sup>4</sup> of Calico Solar, LLC,<sup>5</sup> testified before the Public Utilities Commission on May 17, 2011, that he knew SunCatchers would not be commercially available for the proposed Calico Solar Project no later than late September or early October 2010.

Q All right. When you became involved in late September, did you become involved because you were told that there was an issue regarding whether or not SunCatchers were commercially viable?

A No. I understand that the project was available for purchase at that time, and I think there was a -- there was -- the reason for the sale was related to that, though.

Q Okay. When you say, "related to that, though," one of the issues was whether or not it was commercially viable to utilize SunCatchers, right?

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<sup>4</sup> Mr. O'Shea testified that, while he is an officer of Calico Solar, LLC, he is not an employee of Calico Solar, LLC. Mr. O'Shea is a consultant and is paid by "an affiliate of Calico Solar," K Road Power Management, LLC. Calico Solar, LLC has no employees. See PUC Hearing Transcript, May 17, 2011, *Calico Solar, LLC vs. BNSF*, PUC Proceeding C1010015 (hereafter "PUC Tr. at '\_\_\_:\_\_\_'"), at 66:1-19, attached hereto as Exhibit A.

<sup>5</sup> Calico Solar, LLC is a single purpose entity, designed to insulate itself from liability. Calico Solar, LLC is owned by K Road Sun, LLC, another single purpose entity. K Road Sun, LLC is owned by K Road Power Holdings, LLC. [PUC Tr. at 64:16-65:11, Exhibit A.] Each of these entities is ultimately controlled by a single person, William Kriegel. [PUC Tr. at 64:q16-66:25.] K Road Sun, LLC bought all of the outstanding membership interests in Calico Solar, LLC, but assumed no liabilities. [PUC Tr. at 70:3-13.] The primary assets acquired by K Road Sun, LLC were the Calico Solar ROW and the Commission Decision. [PUC Tr. at 71:2-14.]

A I think commercially available.

Q Commercially available?

A Yes. They weren't available on the schedule that Tessera Solar had thought they would be available.

Q Okay. And you knew that sometime in September of 2010?

A September or October.

PUC Hearing Transcript, May 17, 2011, *Calico Solar, LLC vs. BNSF*, PUC Proceeding C1010015 (hereafter “PUC Tr. at ‘\_\_:\_\_’”), at 69:9-70-2, relevant extracts of which are attached hereto as Exhibit A.

According to the Petition to Amend, Calico Solar does not plan on emplacing any SunCatchers on the proposed PV Project site until Phase 2. Phase 2 will not even begin until 2013, at the earliest. [Petition to Amend at p. 4.6-2.] Notwithstanding this, Calico Solar has no present commitment from Tessera to provide Calico Solar with SunCatchers. Nor does it have a firm commitment from Tessera as to when, if ever, Tessera will provide Calico Solar with a date certain as to when it will be able to manufacture and sell the approximately 4,000 SunCatchers needed by Calico Solar for Phase 2 in the proposed PV Project. [PUC Tr. at 82:20-83:22.]

The technological and commercial feasibility of any project approved and certified by the CEC are of paramount concern. The Warren-Alquist Act is replete with requirements that the CEC consider feasible alternatives. The CEC’s own regulations are laden with references to the requirement of feasibility. See, e.g., 20 CCR §§1702 (defining “feasible”), 1741(2) (requiring the applicant to employ all feasible measures), 1742(b) (requiring the commission staff to review the application to ensure that the proposed project and all proposed mitigation measures are “reasonably necessary, feasible, and available”). Accordingly, a proposed project must be

technologically and commercially feasible, not only throughout the certification process, but thereafter. In tacit recognition of this requirement, the Commission Decision provides:

Applicant and Staff evaluated alternative generating technologies to the proposed project. Staff independently concluded that from an energy efficiency prospective, given the project objectives, location, air pollution control requirements, and the commercial availability of various alternative technologies, that the selected solar thermal technology is a reasonable selection.

[Commission Decision, Efficiency, p. 2; extract attached as Exhibit B.]

Notwithstanding, it is clear that the Initial Project was not technologically and commercially feasible at the time it was approved. The “selected technology” – the SunCatcher – was not then and is not now commercially available. Moreover, as discussed above, the applicant was well aware of this deficiency and failed to advise the CEC Staff or Commission of this fatal defect.

### **3. ANALYSIS OF ISSUES**

#### **Issue 1.a**

**Does the Energy Commission have authority to consider approval of the proposal to reduce electricity generated from Sun Catcher solar thermal technology from 663.5 MW to 100.5 MW?**

In short, yes. The Commission’s jurisdiction clearly extends to a proposed amendment to reduce the size and scope of a project that has been previously properly certified through the Commission’s application and certification process. As discussed above, however, the Commission Decision was based on the faulty premise that the SunCatcher technology was commercially available. Because it



was not then and is not now commercially available, the Commission must withdraw its previous certification decision.

**Issue 1.b.**

**Does the Energy Commission have authority to consider approval of the proposal to install photovoltaic (PV) facilities generating 563 MW on the Calico Solar Project site? If so, explain whether this is because 1) the PV facilities are part of a thermal power plant; 2) the PV facilities are either a related or appurtenant facility; or 3) the PV facilities are located on a site the CEC has licensed. Are there other grounds for the Energy Commission authority to consider approval of the project amendments? If so, please specify what that authority is and how it applies to the proposal.**

In short, no. The Commission's jurisdiction is expressly limited under the Warren-Alquist Act to the construction and modification of thermal powerplants over 50 MW. Cal.Pub.Res. Code §§ 25500, *et seq.* The Petition to Amend describes an initial facility of 275 MW of solar PV generation south of the BNSF mainline. That facility will have all of the requisite support structure located south of the BNSF mainline – to include the main services complex and the substation. At least two years later, the Petition to Amend describes another facility of 288 MW of solar PV generation, coupled with only 100.5 MW of solar thermal generation from SunCatchers. The SunCatcher aspect of the proposed PV Project is speculative at best because SunCatchers are not presently commercially available and Calico Solar has no way of knowing when, if ever, they will be. The Commission is precluded from considering the proposed Petition to Amend because the proposed project is a PV facility outside the Commission's jurisdiction.

The Warren-Alquist Act vests the Commission with "the exclusive power to certify all sites and related facilities in the state." Cal.Pub.Res. Code § 25500. The Commission exercises this authority, "in lieu of any certificate, or similar

document required by any state, local or regional agency, or federal agency to the extent permitted by federal law." *Id.* The authority and regulations under the Warren Alquist Act "shall supersede any applicable statute, ordinance, or regulation of any state, local, or regional agency, or federal agency to the extent permitted by federal law." *Id.* The Commission's exclusive authority is limited, however, to "facilities," which are defined as "any electric transmission line or thermal powerplant, or both electric transmission line and thermal powerplant, regulated according to the provisions of this division." Cal.Pub.Res. Code §25511 (emphasis added). The Public Resources Code further defines "thermal powerplant" as follows:

"Thermal powerplant" means any stationary or floating electrical generating facility using any source of thermal energy, with a generating capacity of 50 megawatts or more, and any facilities appurtenant thereto...

Cal.Pub. Res. Code § 25120 (emphasis added).

Without question, PV facilities do not use thermal energy. Rather, PV modules convert the sun's energy into direct current electricity. [Petition to Amend at p. 2-3.] Projects employing PV technology, therefore, are not "thermal powerplant[s]" within the definition of Section 25120. Removing any potential doubt that could have existed regarding the possible characterization of PV power as a thermal energy technology, the California Legislature expressly amended the Public Resources Code in 1988 to add the following clarifying language:

"Thermal powerplant" does not include any wind, hydroelectric, or solar photovoltaic electrical generating facility.

Cal.Pub. Res. Code § 25120 (as amended by SB 928, Stats.1988, c. 965, § 1, eff. Sept. 19, 1988) (emphasis added).)

The plain meaning of the Legislature's intent could not be clearer: The Commission's siting authority does not extend to solar photovoltaic facilities.

California courts have repeatedly rejected attempts by the Commission to expand its authority beyond the clear language of the Warren-Alquist Act. In *Department of Water & Power v. Energy Resources Conservation & Dev. Com.*, 2 Cal.App.4th 206 (1991), the Court of Appeal upheld a preemptory writ ordering the Commission to cease its attempts to exercise certification jurisdiction over a generation station repowering project. The Court held that the attempted expansion of the Commission's jurisdiction contravened clear legislative intent to limit the scope of the Commission's jurisdiction. *Id.* at 222.

Likewise, the Court of Appeals in *Public Utilities Com. v. Energy Resources Conservation & Dev. Com.*, 150 Cal.App.3d 437 (1984), held that the plain language of the Warren-Alquist Act limited the Commission's jurisdiction over transmission lines after the point of interconnection. "In ascertaining the intent of the Legislature, the court must first look to the words of the statute." *Id.* at 444. Section 25120 is equally clear. Solar PV facilities are excluded from Commission jurisdiction.

Again, it remains entirely speculative whether SunCatchers will ever be commercially available. Accordingly, because SunCatchers are the sole potential basis for the Commission's jurisdiction, there is no plausible basis for the Commission to assert jurisdiction. The Commission therefore has no jurisdiction to grant the Petition to Amend.

Neither is there a plausible argument that the proposed PV Project is within the Commission's jurisdiction because the PV facilities are "appurtenant" to the solar thermal facility. See Cal.Pub.Res. Code § 25120. Facilities or infrastructure "appurtenant" to a solar thermal facility are "annexed to a more important thing." Black's Law Dictionary, 9th ed. 2009. Clearly, the "more important thing" is the PV technology, which will comprise at least 563MW of the proposed 663.5MW total output (nearly 85%). The PV technology cannot reasonably be found to be

appurtenant to the SunCatcher technology, especially given the speculative nature of the SunCatcher technology.

California courts have consistently interpreted the term "appurtenant" to mean a subservient facility that is necessary and beneficial to the dominant premises. *Dubin v. Robert Newhall Chesebrough Trust*, 96 Cal.App.4th 465, 473 (2002) (finding that an appurtenant right must be reasonably necessary to the beneficial enjoyment and use of the premises); *Harrison v. Ziegler* 51 Cal.App. 429, 432 (1921) (finding that commonly used facilities were not appurtenant to the premises where "the use of [the facilities] was merely a convenience, but is not necessary to the beneficial use of the property").

There is no plausible argument that the PV generating technology is necessary or beneficial to the SunCatchers. PV and SunCatchers are separate technologies. Neither needs the other to exist and operate. Nor does Calico Solar's plan to have the separate technologies share certain infrastructure make PV technology appurtenant to SunCatchers.

#### **Issue 1.c.**

**May the Energy Commission act as the lead agency to perform the required CEQA evaluation over both the solar thermal and photovoltaic components of the proposed project modifications? Are there any legal impediments to such an approach?**

As to the first question, no. As to the second question, yes. As set forth above, the Commission's jurisdiction is exclusive, but limited. As discussed above, we do not believe the Commission has jurisdiction, and therefore cannot act as lead agency.

**Issue 1.d.**

**In the Energy Commission's consideration of the proposed amendment to its permit, what are the Energy Commission's responsibilities under CEQA with respect to the proposal to install PV facilities?**

As set forth above, the Commission has no jurisdiction. Accordingly, it has neither authority nor responsibility to consider the proposed amendment under CEQA.

**Issue 1.e.**

**Are there any other considerations relevant to the Energy Commission's jurisdiction with respect to the proposal?**

At this time, BNSF is aware of no other considerations that would be relevant to the Commission's jurisdiction with respect to the Petition to Amend. BNSF will respond further if and when additional relevant information is obtained.

**Issue 2.a.**

**What is the appropriate baseline on environmental conditions on which to base the Energy Commission's CEQA analysis, and why?**

The proper lead agency with jurisdiction over the PV Project must use as the "baseline" (i.e., environmental conditions against which the CEQA analysis is conducted) the *physical conditions of the desert floor* as they exist today. It is well-established that the baseline is not a set of hypothetical conditions assuming all existing permits are fully utilized, as suggested by Calico Solar. *Communities for a Better Environment v. South Coast Air Quality Management District* (2010) 48 Cal.4th 310, 321.

*In Communities for a Better Environment v. South Coast Air Quality Management District*, the Court held: “An approach using hypothetical allowable conditions as the baseline results in illusory comparisons that can only mislead the public as to the reality of the impacts and subvert full consideration of the actual environmental impacts, a result at direct odds with CEQA’s intent.” *Id.* (internal quotations and citations omitted). Here, the use of the Initial Project as the baseline would frustrate the purpose of CEQA by analyzing only the incremental impacts over and beyond a set of hypothetical conditions, which, as will be discussed, are speculative. The appropriate baseline for review of the PV Project, therefore, is physical conditions at the time of commencement of environmental review of the PV Project, i.e., the undisturbed alluvial plain. The baseline does not include any hypothetical changes which might accompany development of the Initial Project.

In addition, Calico Solar cannot rely on the certification for the Initial Project to bootstrap the certification of the PV Project, because it has no intention of constructing the Initial Project as described in the Plan of Development, due to, among other reasons, the fact that the SunCatcher technology is not commercially available. PUC Tr. at 69:9-70-2. Constructing the project as described in the Plan of Development is a condition to the BLM ROW. *See* Exhibit C hereto at §5(d). Moreover, Calico Solar does not have the right to construct the Initial Project. As noted above, no groundbreaking activity can occur on the project site until and unless the BLM issues a Notice to Proceed. *Id.* No Notice to Proceed

has been issued for the Initial Project, and in fact, the BLM has issued two separate Notices of Intent to Terminate the ROW for failure to comply with the terms of the ROW, on February 24 and April 28, 2011, attached as Exhibits D and E hereto, respectively. Calico Solar has also failed to comply with the CEC's certification of the Initial Project, in that it has failed to perform a number of studies, reports and plans required under the Conditions of Certification for the Initial Project. Compliance with the CEC Conditions of Certification is also a condition of the BLM ROW. *See* Exhibit C hereto, BLM ROW at §5(b) and BLM ROW Exhibit B, Stipulation 2.

Also, the photovoltaic project which is now being proposed as an amendment to the Initial Project was preliminarily analyzed as an alternative to the Initial Project in the joint CEC/BLM Staff Assessment/Draft Environmental Impact Statement and other environmental documents, pursuant to the requirement under CEQA that an environmental document "describe a range of reasonable alternatives to the project ... which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." CEQA Guidelines §15126.6(a). These alternatives by definition are different projects from the proposed project. Thus, Calico Solar's proposed PV project cannot appropriately be deemed an amendment to the Initial Project. Alternative projects cannot be "amended" into a different project by piggybacking

environmental review on an earlier project which was never, and will never be built.

It must also be acknowledged that the PV project was eliminated from further consideration as an alternative to the Initial Project by both agencies with jurisdiction due to the anticipated environmental impacts from such a project. In its environmental review of the Initial Project, the BLM stated: "The utility-scale solar PV technology was eliminated from detailed analysis because it would require the entire site to be graded. This would result in a greater effect on biological and cultural resources than the Calico Solar Project, which would not require grading the entire site. It would therefore have greater environmental effects than the Proposed Action." Calico Solar Final Environmental Impact Statement, August 6, 2010 ("FEIS"), excerpts of which are attached hereto as Exhibit F, at p. 2-53.

While Calico Solar asserts that its proposed Project will not require grading of the entire site, at this point in time there is no factual basis to support their position. The PV Project would require the placement of tens of thousands more poles to support the solar technology than would the Initial Project. It is indisputable that these additional poles and related construction activities and equipment will disturb the earth around and between the poles. The increased grading and drilling may well result in as high a degree of disturbance of the surface of the desert's alluvial plain, as was contemplated by the BLM and CEC in



their original analyses rejecting PV technology at this location. The more ground disturbance, the greater the degree of hydrological impacts to the proposed project site. Thus, the PV Project is likely to result in increased stormwater runoff and sediment transport through the project site and onto the BNSF ROW.

In addition to the hydrological impacts, the PV technology may result in significant and unavoidable impacts, including health impacts, to BNSF employees, agents and operations, and to the public, from glare and glint from the PV panels. These glare and glint impacts of PV technology have not been analyzed and require the appropriate lead agency with jurisdiction to conduct a complete environmental review and analysis of the PV Project.

In addition, due to the change in phasing of project construction, in connection with the PV Project, Calico Solar seeks to: 1) delay the construction of the proposed grade separation; 2) place private at-grade crossings in a BNSF station or in the BNSF Right-of-Way; 3) drive construction vehicles within the BNSF Right-of-Way for approximately 1.5 miles for approximately 2.5 years; and 4) place a waterline under the BNSF Right-of-Way. These proposals raise numerous safety concerns and interfere with BNSF's rail operations. The new environmental review process should consider alternatives to these elements of the proposed Calico Solar PV Project to avoid adverse impacts on the BNSF employees, agents and operations and potential impacts on interstate commerce.

It is clear, therefore, that the lead agency conducting environmental review of the PV Project cannot evaluate solely the incremental difference in environmental impacts between the Initial Project and the PV Project. Rather, in order to comply with CEQA, the lead agency must use as a baseline the physical conditions in the vicinity of the Project site as they exist today.

**Issue 2.b.**

**Are any of the conditions identified in CEQA Guidelines section 15162 present? If so, what are they, and which portions of the Energy Commission's December 2010 Calico Solar Project decision would the Commission be required to re-evaluate?**

CEQA Guidelines section 15162 applies in those situations “[w]hen an EIR has been certified”. CEQA Guidelines §15162. As stated above, we do not believe that any EIR or CEQA-equivalent document has been properly certified with respect to the proposed PV Project. The guideline, therefore, would not apply. BNSF will respond further in its Reply Brief on Jurisdiction and Baseline to any additional information it receives. BNSF has, however, identified in the response to Issue 2.a., some of the major environmental issues the appropriate lead agency should evaluate in performing an environmental review of the proposed utility-scale PV Project. Additional issues have been identified in its Petition to Intervene. The PV Project is by definition a separate project and requires a complete environmental review under CEQA.

## **CONCLUSION**

For the foregoing reasons, BNSF respectfully requests that the Commission:

1. Dismiss the Petition to Amend for lack of jurisdiction; and
2. Withdraw the Commission Decision previously issued on December 1, 2010, in light of the evidence that SunCatchers were not then and are not now commercially available.

May 23, 2011

\_\_\_\_\_/s/  
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**FOR THE CALICO SOLAR PROJECT  
AMENDMENT**

**Docket No. 08-AFC-13C  
PROOF OF SERVICE  
(Revised 5/18/2011)**

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\*indicates change

**INTERESTED**  
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### DECLARATION OF SERVICE

I, \_\_\_\_\_, declare that on \_\_\_\_\_, 2011, I served by U.S. mail and filed copies of the attached \_\_\_\_\_, dated \_\_\_\_\_, 2011. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: [www.energy.ca.gov/sitingcases/calicosolar/compliance/index.html].

The documents have been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

*(Check all that Apply)*

#### FOR SERVICE TO ALL OTHER PARTIES:

- \_\_\_\_\_ sent electronically to all email addresses on the Proof of Service list;
- \_\_\_\_\_ by personal delivery;
- \_\_\_\_\_ by delivering on this date, for mailing with the United States Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses **NOT** marked "email preferred."

**AND**

#### FOR FILING WITH THE ENERGY COMMISSION:

- \_\_\_\_\_ delivering an original paper copy and sending one electronic copy by e-mail to the address below (*preferred method*);

**OR**

- \_\_\_\_\_ depositing in the mail an original and 12 paper copies, as follows:

#### **CALIFORNIA ENERGY COMMISSION**

Attn: Docket No. 08-AFC-13C  
1516 Ninth Street, MS-4  
Sacramento, CA 95814-5512  
[docket@energy.state.ca.us](mailto:docket@energy.state.ca.us)

I declare under penalty of perjury that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

\_\_\_\_\_

# **Exhibit A**

1 SAN FRANCISCO, CALIFORNIA, MAY 17, 2011 -

2 10:00 A.M.

3 \* \* \* \* \*

4 ADMINISTRATIVE LAW JUDGE HECHT: We'll  
5 be on the record.

6 The Commission will please come to  
7 order. It is 10:00 a.m. on Tuesday, May  
8 17th, 2011, and this is the time and place  
9 set for the first day of evidentiary hearings  
10 in Commission Case 10-10-015, which is a  
11 complaint brought by Calico Solar, LLC,  
12 Complainant, against BNSF Railway Company,  
13 Defendant.

14 As you probably recall from the  
15 prehearing conferences held in this  
16 proceeding, I am Jessica Hecht, the  
17 Administrative Law Judge assigned to this  
18 proceeding and the Presiding Officer for this  
19 proceeding. Commissioner Ferron is the  
20 assigned Commissioner. That is a change  
21 since the last time we met.

22 Last week I sent a request to the  
23 Service List via e-mail asking for parties to  
24 agree on a proposed hearing schedule and  
25 provide me with that along with estimates of  
26 cross-examination times for each witness.  
27 That e-mail also provided parties with some  
28 logistical information that I hope will help



1           A    No.

2           Q    Were you ever licensed to practice  
3 law?

4           A    Yes.

5           Q    Okay. Did you graduate from  
6 University of Chicago School of Law?

7           A    I did, yes.

8           Q    And you practice as a lawyer?

9           A    I do not practice law.

10          Q    You did practice as a lawyer?

11          A    I did, yes.

12          Q    Okay. And then you stopped?

13          A    Yes.

14          Q    Okay. When did you stop?

15          A    Approximately 2006, I believe.

16          Q    2006. Now, Calico Solar is a  
17 single-purpose entity, right?

18          A    It is, yes.

19          Q    And a single-purpose entity is  
20 designed at least in part to insulate it from  
21 liability?

22          A    Yes.

23          Q    Now, Calico Solar, LLC, is owned by  
24 what entity?

25          A    K Road Sun, LLC.

26          Q    And K Road Sun, LLC, is that a  
27 single-purpose entity?

28          A    It is, yes.

1           Q   And Calico Solar, LLC, has one  
2 member, correct?

3           A   Yes.

4           Q   And that's K Road Sun?

5           A   Sun, LLC, yes.

6           Q   Now, K Road Sun, LLC, does it have  
7 one member?

8           A   Yes, it does.

9           Q   And who is that?

10          A   I believe it's K Road Power  
11 Holdings, LLC.

12          Q   Okay. Now, you didn't become  
13 involved in this project until when,  
14 December, January?

15          A   Depends on what you mean by  
16 "involved." I was -- I became aware of the  
17 project in the late fall of 2010, but I was  
18 not involved in the day-to-day work  
19 associated with the project until late  
20 February of 2011.

21          Q   Okay. When did you become an  
22 employee of Calico Solar, LLC?

23          A   I'm not an employee of Calico  
24 Solar. I'm a consultant.

25          Q   You're a consultant?

26          A   Yes.

27          Q   Does it have any employees?

28          A   No.

1           Q   But you say you're Vice President  
2 of Calico Solar?

3           A   Right. I'm an elected officer of  
4 Calico Solar.

5           Q   You're an elected officer as a  
6 consultant?

7           A   Yes.

8           Q   And you're not paid by Calico  
9 Solar, are you?

10          A   No.

11          Q   Who are you paid by?

12          A   An affiliate of Calico Solar.

13          Q   Which is?

14          A   K Road Power Management, LLC.

15          Q   That's two levels up?

16          A   Yes.

17          Q   And that's owned by who?

18          A   It's indirectly -- I believe it's  
19 indirectly controlled by William Kriegel.

20          Q   He's the managing member, right?

21          A   He may have a company interposed  
22 between himself and that entity.

23          Q   But he has the controlling  
24 interest, right?

25          A   He has the controlling interest.

26          Q   And that holding company, how many  
27 employees does it have?

28          A   I would think ten employees.

1 MR. LAMB: Thank you.

2 Q Mr. Kriegel was a former --  
3 formerly worked at Goldman Sachs, right?

4 A I'm sorry. A former?

5 Q Formerly worked at Goldman Sachs?

6 A Not to my knowledge.

7 Q Never?

8 A Not my knowledge.

9 Q All right. When you became  
10 involved in late September, did you become  
11 involved because you were told that there was  
12 an issue regarding whether or not SunCatchers  
13 were commercially viable?

14 A No. I understand that the project  
15 was available for purchase at that time, and  
16 I think there was a -- there was -- the  
17 reason for the sale was related to that,  
18 though.

19 Q Okay. When you say, "related to  
20 that, though," one of the issues was whether  
21 or not it was commercially viable to utilize  
22 SunCatchers, right?

23 A I think commercially available.

24 Q Commercially available?

25 A Yes. They weren't available on the  
26 schedule that Tessera Solar had thought they  
27 would be available.

28 Q Okay. And you knew that sometime

1 in September of 2010?

2 A September or October.

3 Q So when did K Road buy Calico  
4 Solar?

5 A I believe the date on the purchase  
6 agreement is December 24th, 2010.

7 Q And what was it that K Road bought?

8 A K Road bought the -- all of the  
9 outstanding membership interests in Calico  
10 Solar, LLC.

11 Q Did it assume the liabilities of  
12 Calico Solar, LLC?

13 A No.

14 Q So it was an asset purchase?

15 A It was a purchase of membership  
16 interests.

17 Q Okay. Assume it got the assets but  
18 not the liabilities.

19 A It bought a company that has assets  
20 and liabilities, but K Road Sun did not  
21 assume the liabilities associated with the  
22 project.

23 Q Oh, that's right. It's a single-  
24 purchase entity. So it's cut out, right?

25 A That's the nature of that sort of  
26 purchase.

27 Q Okay. Now, the assets, other than  
28 the right-of-way and the certification, what

1 other assets did Calico have?

2 A I mean it had contractual assets.

3 Q Such as?

4 A Let's see. It had a contract to  
5 purchase a transformer, two transformers  
6 actually at the time, that turned into a  
7 contract for one transformer. It had other  
8 contracts along those lines.

9 Q Okay.

10 A Smaller contracts for fencing,  
11 contracts associated with the project.

12 Q So the primary asset then was the  
13 right-of-way and the certification, correct?

14 A Yes. That's correct.

15 Q Now, at that time was there a power  
16 purchase agreement for SoCal Edison?

17 A When you say at that time?

18 Q At the time that K Road purchased  
19 Calico Solar, LLC.

20 A No, there was not.

21 Q Okay. And presently there's no  
22 power purchase agreement, right?

23 A That's correct.

24 Q What -- how much did K Road pay for  
25 Calico Solar?

26 MS. FOLEY GANNON: I'd object to that.

27 THE WITNESS: I believe that's  
28 confidential.

1 track?

2 A I'm not exactly sure. It was on  
3 the other side of the line of tamarisk trees  
4 that I understood defined the right-of-way.

5 Q Okay.

6 A On the southern side of those  
7 trees.

8 Q Would you say it was over a hundred  
9 feet?

10 A Probably, yes.

11 Q You can take your seat, please.

12 ALJ HECHT: And while the witness was  
13 responding, he was pointing to the map that  
14 is labeled Figure 4 in Exhibit 104.  
15 Obviously we can't have on the record what he  
16 was pointing at, but I believe that Mr.  
17 O'Shea narrated what he was pointing at as he  
18 went along.

19 MR. LAMB: Thank you.

20 Q Sir, do you have a present  
21 commitment from Tessera Solar when they will  
22 be able to provide SunCatchers as being  
23 commercially available?

24 A We do not.

25 Q Have they provided you with any  
26 estimate?

27 A They have.

28 Q When is that?

1           A    They say within a couple of years.

2           Q    And have you seen anything in the  
3 form of evidence that would support their  
4 estimate?

5           A    I've had discussions with some  
6 people at Tessera or SES, Sterling Energy  
7 Systems, and NTR, their parent company.

8           Q    Well, the original project called  
9 for around 24,000 SunCatchers, right?

10          A    Yes.

11          Q    Okay. And now you're looking at  
12 what, 4 or 5,000 SunCatchers?

13          A    Approximately 4,000.

14          Q    And you have no present commitment  
15 from Tessera, right?

16          A    A binding commitment to purchase --

17          Q    Right.

18          A    -- SunCatchers or to sell us  
19 SunCatchers?

20          Q    Or for them to provide you as of a  
21 date certain?

22          A    That's correct.

23          Q    Who is the general counsel at K  
24 Road Holdings now?

25          A    I don't believe K Road has a  
26 general counsel.

27          Q    No general counsel?

28          A    No.



## **Exhibit B**

# CALICO SOLAR POWER PROJECT

## Commission Decision



CALIFORNIA  
ENERGY COMMISSION  
Arnold Schwarzenegger, Governor

OCTOBER 2010  
CEC-800-2010-012-CMF

DOCKET NUMBER 08-AFC-13

**CALIFORNIA  
ENERGY COMMISSION**

1516 Ninth Street  
Sacramento, CA 95814

<http://www.energy.ca.gov/sitingcases/calicosolar/index.html>

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*Vice Chair*

JEFFREY D. BYRON  
*Commissioner*

ANTHONY EGGERT  
*Commissioner*

ROBERT B. WEISENMILLER, Ph.D  
*Commissioner*

PAUL KRAMER  
*Hearing Officer*

**DISCLAIMER**

This report was prepared by the California Energy Commission Calico Solar Project AFC Committee as part of Calico Solar Project, Docket No. 08-AFC-13. The views and recommendations contained in this document are not official policy of the Energy Commission until the report is adopted at an Energy Commission Business Meeting.



BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT  
COMMISSION OF THE STATE OF CALIFORNIA  
1516 NINTH STREET, SACRAMENTO, CA 95814  
1-800-822-6228 – WWW.ENERGY.CA.GOV

APPLICATION FOR CERTIFICATION FOR THE  
**CALICO SOLAR PROJECT**  
(Formerly SES SOLAR 1)

DOCKET No. 08-AFC-13

ORDER No. 10-1028-03

### COMMISSION ADOPTION ORDER

This Commission Order adopts the Commission Decision on the **Calico Solar Project**. It incorporates the Presiding Member's Proposed Decision (PMPD) in the above-captioned matter and the Committee Errata. The Commission Decision is based upon the evidentiary record of these proceedings and considers the comments received at the October 28, 2010 business meeting. The text of the attached Commission Decision contains a summary of the proceedings, the evidence presented, and the rationale for the findings reached and Conditions imposed.

This **ORDER** adopts by reference the text, Conditions of Certification, Compliance Verifications, and Appendices contained in the Commission Decision. It also adopts specific requirements contained in the Commission Decision which ensure that the proposed facility will be designed, sited, and operated in a manner to protect environmental quality, to assure public health and safety, and to operate in a safe and reliable manner.

### FINDINGS

The Commission hereby adopts the following findings in addition to those contained in the accompanying text:

1. The **Calico Solar Project** will provide a degree of economic benefits and electricity reliability to the local area.
2. The Conditions of Certification contained in the accompanying text, if implemented by the project owner, ensure that the project will be designed, sited, and operated in conformity with applicable local, regional, state, and federal laws, ordinances, regulations, and standards, including applicable public health and safety standards, and air and water quality standards.
3. Implementation of the Conditions of Certification contained in the accompanying text will ensure protection of environmental quality and assure reasonably safe and reliable operation of the facility. The Conditions of Certification also assure that the project's direct, indirect, and cumulative adverse environmental impacts will be mitigated to the extent feasible. Where full mitigation is not feasible, overriding considerations warrant acceptance of those impacts.

4. As is discussed in Section VIII (Override Findings) of the PMPD, the benefits of the **Calico Solar Project** outweigh any significant direct, indirect, or cumulative impacts which may result from its construction or operation
5. Existing governmental land use restrictions are sufficient to adequately control population density in the area surrounding the facility and may be reasonably expected to ensure public health and safety.
6. The project is subject to Fish and Game Code section 711.4 and the project owner must therefore pay a nine hundred forty-nine dollars and fifty cents (\$949.50) fee to the California Department of Fish and Game.
7. No feasible mitigation measures or site or generation technology alternatives to the project, as described during these proceedings, exist which would reduce or eliminate any significant environmental impacts of the mitigated project.
8. An environmental justice screening analysis was conducted and that the project, as mitigated, will not have a disproportionate impact on low-income or minority populations.
9. The Decision contains a discussion of the public benefits of the project as required by Public Resources Code section 25523(h).
10. The Decision contains measures to ensure that the planned, temporary, or unexpected closure of the project will occur in conformance with applicable laws, ordinances, regulations, and standards.
11. The proceedings leading to this Decision have been conducted in conformity with the applicable provisions of Commission regulations governing the consideration of an Application for Certification and thereby meet the requirements of Public Resources Code sections 21000 et seq. and 25500 et seq.

### **ORDER**

Therefore, the Commission **ORDERS** the following:

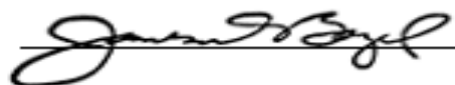
1. The Application for Certification of the **Calico Solar Project** as described in this Decision is hereby approved and a certificate to construct and operate the project is hereby granted.
2. The approval of the Application for Certification is subject to the timely performance of the Conditions of Certification and Compliance Verifications enumerated in the accompanying text and Appendices. The Conditions and Compliance Verifications are integrated with this Decision and are not severable therefrom. While the project owner may delegate the performance of a Condition or Verification, the duty to ensure adequate performance of a Condition or Verification may not be delegated.
3. This Decision is adopted, issued, effective, and final on October 28, 2010.
4. Reconsideration of this Decision is governed by Public Resources Code, section 25530.
5. Judicial review of this Decision is governed by Public Resources Code, section 25531.

6. The Commission hereby adopts the Conditions of Certification, Compliance Verifications, and associated dispute resolution procedures as part of this Decision in order to implement the compliance monitoring program required by Public Resources Code section 25532. All conditions in this Decision take effect immediately upon adoption and apply to all construction and site preparation activities including, but not limited to, ground disturbance, site preparation, and permanent structure construction.
7. This Decision licenses the project owner to commence construction on the project within five years of this Decision date. Subject to the provisions of California Code of Regulations, title 20, section 1720.3, this license expires by operation of law when the project's start-of-construction deadline passes with no construction.
8. The project owner shall provide the Executive Director a check in the amount of nine hundred forty-nine dollars and fifty cents (\$949.50) payable to the California Department of Fish and Game.
9. The Executive Director of the Commission shall transmit a copy of this Decision and appropriate accompanying documents, including the Department of Fish and Game fee, as provided by Public Resources Code section 25537, California Code of Regulations, title 20, section 1768, and Fish and Game Code, section 711.4.
10. We order that the Application for Certification docket file for this proceeding be closed effective the date of this Decision, with the exception that the docket file shall remain open for 30 additional days solely to receive material related to a petition for reconsideration of the Decision.

Dated: October 28, 2010, at Sacramento, California.



KAREN DOUGLAS  
Chair



JAMES D. BOYD  
Vice Chair



JEFFREY D. BYRON  
Commissioner



ANTHONY EGGERT  
Commissioner



ROBERT B. WEISENMILLER  
Commissioner

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## **B. POWER PLANT EFFICIENCY**

Pursuant to the California Environmental Quality Act (CEQA), the Commission must determine whether the consumption of fossil fuel (a non-renewable form of energy) will result in substantial impacts upon energy resources. (Cal. Code Regs., tit. 14 § 15126.4(a)(1), App. F.). The Calico Solar Project will not use natural gas (fossil fuel) for power generation. The project would decrease reliance on fossil fuel, and would increase reliance on renewable energy resources. The undisputed evidence establishes that the project would not create significant adverse effects on fossil fuel energy supplies or resources, would not require additional sources of energy supply, and would not consume fossil fuel energy in a wasteful or inefficient manner. (Ex. 300, p. D.3-1; 8/4/10 RT 183: 8-9.)

The evidence examines the efficiency of the Calico Solar project design and compares project efficiency to that of other solar projects. (Ex. 300, pp. D.3-1 and D.3-7.) There are no LORS that establish solar power plant efficiency criteria. (Ex. 300, p. D.3-12.)

### **SUMMARY AND DISCUSSION OF THE EVIDENCE**

The Calico Solar Project is a solar thermal power plant that will produce a total of 663.5 MW (nominal net output) and will employ the Stirling Energy Systems SunCatcher technology. The project would occupy approximately 4,613 acres of land and would consist of 26,540 SunCatchers (Ex. 1 AFC §§ 1.1, 1.3, 2.2, 3.1, 3.3; Ex. 300, p. D.3-4; Ex. 317, p. B.1-2.).

Each SunCatcher is composed of a pedestal, a mirrored dish that tracks the sun, and a power conversion unit (PCU) consisting of a solar receiver, a closed-cycle Stirling engine, and a generator that captures the solar energy and converts it to electricity. Each SunCatcher is capable of generating 25 kW of power. Power would be routed from the SunCatchers to electrical transformers, then to a switchyard located near the center of the project. ( Ex.1, AFC §§ 3.1, 3.1.1, 3.4.1, 3.4.3, 3.4.4.1, 3.4.4.2; Ex. 300, p. D.3-4.).

The project will not use fossil fuel to generate electricity. Each of the 26,540 Stirling engines is filled with hydrogen gas, which acts as a working fluid that allows the engine to operate. During operation, hydrogen leaks from the engines and must be continuously replenished from a centralized hydrogen system connected to each SunCatcher., Some electricity consumption will result due to the necessity of replacing hydrogen gas that leaks from the Stirling engines. The

project will produce hydrogen gas onsite through electrolysis of water, which will consume 215 MW-hours of electrical energy per year. (Ex. 300, pp. D.3-4 to D.3-5.)

The Stirling engine that is the heart of the SunCatcher technology is cooled by an automotive-style cooling system. Waste engine heat is conducted via an enclosed cooling loop to a radiator that dumps the waste heat to the atmosphere. This is a dry cooling system; its only water consumption is that required to make up any unintended leakage from the system. Thus, we concur with Staff's determination that the cooling technology selected for this project appears optimum. (Ex. 300, p. D.3-8.)

Applicant and Staff evaluated alternative generating technologies to the proposed project. Staff independently concluded that from an energy efficiency prospective, given the project objectives, location, air pollution control requirements, and the commercial availability of various alternative technologies, that the selected solar thermal technology is a reasonable selection. This is evaluated in the **Alternatives** section of this Decision. (Ex. 300, p. D.3-6.)

#### 1. Fossil Fuel Use - Impacts

The Calico Solar Project, if constructed and operated as proposed, will use solar energy to generate all of its capacity, consuming no natural gas for power production. The project will decrease reliance on fossil fuel, and will increase reliance on renewable energy resources. The evidence establishes that the project will not create significant adverse effects on energy supplies or resources, will not require additional sources of energy supply, and will not consume energy in a wasteful or inefficient manner. (Ex. 300, p. D.3-1.) Therefore, we find that this project will present no significant adverse impacts on energy resources.

#### 2. Solar Land Use Impacts

The evaluation of solar power plant efficiency includes land use efficiency because of the large expanses of land covered by these facilities. To address land use efficiency, solar efficiency must be determined by evaluating the effectiveness of the specific technology used and the product of three key steps: capture sun's rays, convert energy to heat, and convert heat to electricity. The greater the project's solar efficiency, the less land the plant must occupy to produce a given power output. Therefore, land use efficiency is expressed in terms of power produced, or MW per acre. (Ex. 300, pp. D.3-2, D.3-7..)

The evidence includes a comparison of MWs per acre for the Calico Solar Project and other solar projects currently under review by the Commission. **Efficiency Table 1** provides the power and energy output and the extent of the land occupied for the Calico Solar Project and other solar projects under review. For comparison purposes, the table also includes the solar land use efficiency for a typical fossil fuel-fired (natural gas-fired) combined cycle power plant. (Ex. 300, pp. D.3-2 and D.3-7.)

According to the Staff analysis, the Calico Solar project, as proposed prior to its downsizing, would produce power at the rate of 850 MW net, and will generate energy at the rate of 1,840,000 MW-hours net per year, while occupying approximately 6,215 acres (Ex. 1. AFC §§ 1.1, 1.3, 2.2, 3.1, 3.11.1.)<sup>1</sup> Staff calculations for the Calico project establish:

**Power-based efficiency:**  $850 \text{ MW} \div 6,125 \text{ acres} = 0.14 \text{ MW/acre}$  or **7.3 acres/MW**

Staff calculates energy-based land use efficiency thus:

**Energy-based efficiency** (the first equation removes energy consumed in hydrogen replenishment):

$$1,840,000 \text{ MWh/year} - 215 \text{ MWh/year} = 1,839,785 \text{ MWh/year}$$

$$1,839,785 \text{ MWh/year} \div 6,215 \text{ acres} = \mathbf{296 \text{ MWh/acre-year}}$$

As seen in **Efficiency Table 1** below, the Calico Solar Project, employing the Stirling Energy Systems SunCatcher technology, will be less efficient in use of land than the Beacon Solar, Ridgecrest Solar, Palen Solar, and Blythe Solar projects, which will employ linear parabolic trough technology. Calico Solar is more efficient in use of land than the Ivanpah Solar Electric Generating System project, which will employ BrightSource power tower technology. (Ex. 300, p. D.3-7.)

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<sup>1</sup> These results are also representative of the performance of the Scenario 5.5 that is certified in this Decision due to a proportionate reduction in land used and project output. (Ex 317, p. D.3-1.)

**Efficiency Table 1 — Solar Land Use Efficiency**

Project	Generating Capacity (MW net)	Annual Energy Production (MWh net)	Annual Fuel Consumption (MMBtu LHV)	Footprint (Acres)	Land Use Efficiency (Power-Based) (MW/acre)	Land Use Efficiency (Energy – Based) (MWh/acre-year)	
						Total	Solar Only <sup>1</sup>
<b>Calico Solar (09-AFC-13)</b>	<b>850</b>	<b>1,840,000</b>	<b>0</b>	<b>6,215</b>	<b>0.14</b>	<b>296</b>	<b>296</b>
Beacon Solar (08-AFC-2)	250	600,000	36,000	1,240	0.20	484	480
Ivanpah SEGS (07-AFC-5)	400	960,000	432,432	3,744	0.11	256	238
Abengoa Solar (09-AFC-5)	250	630,000	94,280	1,420	0.18	444	434
Blythe Solar (09-AFC-6)	1,000	2,100,000	207,839	5,950	0.17	353	348
Palen Solar (09-AFC-7)	500	1,000,000	103,919	2,970	0.17	337	332
Genesis Solar (09-AFC-8)	250	600,000	60,000	1,800	0.14	333	329
Ridgecrest Solar (09-AFC-9)	250	500,000	51,960	1,440	0.17	347	342
San Joaquin Solar Hybrid (08-AFC-12)	106	774,000	5,899,500	640	0.17	1,209	415
Avenal Energy (08-AFC-1) <sup>2</sup>	600	3,023,388	24,792,786	25	24.0	120,936	N/A

<sup>1</sup>Net energy output is reduced by natural gas-fired combined cycle proxy energy output; see **Efficiency Appendix A**.

<sup>2</sup>Example natural gas-fired combined cycle plant.

Source: Ex. 300, p. D.3-7

Based on the uncontroverted evidence, we make the following findings and reach the following conclusions:

### **FINDINGS OF FACT**

1. The Calico Solar Project will provide approximately 663.5 MW of electrical power and employ Stirling Energy Systems SunCatcher technology, which does not use fossil fuel to generate electricity.
2. The project will use hydrogen gas in the Stirling engines. Hydrogen gas will be produced onsite by electrolysis of water, which will consume 215 MW-hours per year of the electricity generated by the facility.
3. The evidence establishes that the project's fuel consumption will be negligible and therefore no alternative fuel sources were evaluated.
4. The impact of the project's fuel consumption on energy supplies and energy efficiency will be insignificant.
5. The project will decrease reliance on fossil fuel and will increase reliance on renewable energy resources. Consequently, the project will help in reducing California's dependence on fossil fuel-fired power plants.
6. The evidentiary record contains an analysis of the project's land use efficiency and energy output in comparison to other solar projects currently under review by the Commission.
7. The project will occupy approximately 7.3 acres per MW of power output, a figure higher than many other solar power technologies.
8. The Calico Solar Project represents one of the least land use-efficient solar technologies proposed among the projects currently in the Energy Commission's licensing process.
9. No Federal, State, or local laws, ordinances, regulations, or standards apply to the efficiency of this project.

### **CONCLUSIONS OF LAW**

1. The Calico Solar Project will not create adverse effects upon energy supplies or resources, require additional sources of energy supply, or consume energy in a wasteful or inefficient manner.
2. No Conditions of Certification are required for this topic area.

## **Exhibit C**



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
RIGHT OF-WAY LEASE/GRANT

SERIAL NUMBER CACA-49537

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1. As authorized by the Record of Decision for the Calico Solar LLC, a right-of way lease/grant is hereby issued pursuant to Title V of the Federal Land Policy and Management Act of October 21, 1976 (90 Stat. 2776; 43 U.S.C. 1761) and the Bureau of Land Management right of-way regulations (43 CFR Part 2800).

2. Nature of Interest:

a. By this instrument, the holder:

Calico Solar, LLC  
4800 North Scottsdale Road, Ste. 5500  
Scottsdale, AZ 85251 7639

receives a right to use and occupy the following described public lands to construct, operate, maintain, and decommission a 663.5 MW thermal concentrated solar power electric generation project, and its ancillary facilities as described in the approved Plan of Development (POD):

See attached legal description and map (Exhibit A).

- b. The instrument issued herein consists of a concentrated thermal solar power facility, generation-tie transmission line, project site perimeter road and auxiliary facilities, and contains 4,604 acres, more or less.
- c. This instrument for the thermal concentrated solar power electric generation project, and its ancillary facilities shall expire on December 31, 2039, 30 years from its effective date, unless, prior thereto, it is relinquished, abandoned, or terminated pursuant to the terms and conditions of this instrument or of any applicable Federal law or regulation.
- d. This instrument may be renewed by the Authorized Officer. The holder is required to submit an application for renewal at least 120 calendar days prior to the expiration date of this instrument. The Authorized Officer will review the application for renewal to ensure the holder is complying with the terms, conditions, and stipulations of this instrument and applicable laws and regulations. If renewed, the right of-way shall be subject to the regulations existing at the time of renewal and any other terms and conditions that the Authorized Officer deems necessary to protect the public interest.

- e. Notwithstanding the renewal, expiration, relinquishment, abandonment, or termination of this instrument, the provisions of this instrument, to the extent applicable, shall continue in effect and shall be binding on the holder, its successors, or assigns, until they have fully satisfied the obligations and/or liabilities accruing herein before or on account of the renewal, expiration, relinquishment, abandonment, or termination of this authorization.
- f. The Authorized Officer retains the right of access to the lands included within the right-of-way at any time and may enter any facility on the right of-way in accordance with 43 CFR 2805.15(a). The holder shall pay monitoring fees in accordance with 43 CFR 2805.16 as specified in the master agreement with BLM for the reasonable costs incurred in monitoring the construction, operation, maintenance, and decommission of the right of way.
- g. This instrument is issued subject to valid existing rights in accordance with 43 CFR 2805.14.

3. Rental:

- a. For and in consideration of the rights granted, the holder agrees to pay the Bureau of Land Management the fair market value of the right-of way, which includes both base rent and a megawatt capacity fee, as determined by the Authorized Officer unless specifically exempted from such payment by law or regulation. Provided, however, that the rental may be adjusted by the Authorized Officer, whenever necessary, to reflect changes in fair market value as determined by the application of sound business management principles, and so far as practicable and feasible, in accordance with comparable commercial practices. The rental provisions of this authorization may also be modified consistent with the provisions of any regulatory changes or pursuant to the provisions of any new or revised statutory authorities.
- b. The rental includes an annual base rent for the acreage of the public land included in the authorization and a megawatt capacity fee based on the authorized megawatt capacity of the approved solar energy facilities. The base rent is due and payable upon the date of issuance of this instrument and will be paid on an annual basis consistent with the regulations. The base rent will be adjusted each year based on the Implicit Price Deflator Gross Domestic Product (IPD GDP) index. The megawatt capacity fee is based on the authorized megawatt capacity approved by the Authorized Officer, or an approved phase of development, and will be paid on an annual basis upon the start of electric generation from the solar energy facilities. The megawatt capacity fee will be phased in over a 5 year period after the start of electric generation (at the rate of 20 percent the first year, 40 percent the second year, 60 percent the third year, 80 percent the fourth year, and 100 percent the fifth and subsequent years of operations). The 5 year phase-in period will apply separately to each phase of development as approved by the Authorized Officer. The Calico Solar Rental Payment Proposal authorized by the California State Director approves the MW Capacity Fee payment for quarterly annual for actual capacity that begins generation.

4. Bond:

- a. A Performance and Reclamation bond, in an amount determined by the Authorized Officer, shall be obtained by the holder to ensure compliance with the terms and conditions of this instrument. The Authorized Officer will require that the holder submit a Reclamation Cost Estimate for review and to assist the Authorized Officer in determining the bond amount. The holder shall provide the Authorized Officer proof that a bond in the required amount has been obtained by such date as specified by the Authorized Officer. The amount of the bond will be limited to the anticipated liabilities associated with the activities approved by the Notice to Proceed. If the Notice to Proceed is limited to only an initial phase of development or activity, the bond amount will be limited to that phase or activity. The bond amount would increase with the issuance of a Notice to Proceed for future phases of development or additional activities. The bond must be maintained in effect until removal of improvements and restoration of the right-of way has been accepted by the Authorized Officer. Acceptable bond instruments include cash, cashier's or certified check, certificate or book entry deposits, negotiable U.S. Treasury securities (notes, bills, or bonds) equal in value to the bond amount, surety bonds from the approved list of sureties (U.S. Treasury Circular 570) payable to the Bureau of Land Management (BLM), irrevocable letters of credit payable to the BLM issued by financial institutions that have the authority to issue letters of credit and whose operations are regulated and examined by a federal agency, or a policy of insurance that provides BLM with acceptable rights as a beneficiary and is issued by an insurance carrier that has the authority to issue insurance policies in the applicable jurisdiction and whose insurance operations are regulated and examined by a federal or state agency. The Authorized Officer will not accept a corporate guarantee as an acceptable form of bond. The Authorized Officer will review the bond on an annual basis to ensure adequacy of the bond amount. The bond will also be reviewed at the time of any assignment, modification, or renewal of this instrument. The Authorized Officer may increase or decrease the bond amount at any time during the term of the right of-way authorization, consistent with the regulations.
- b. The holder agrees that any bond held as security for holder's performance of the terms and conditions of this instrument may, upon failure on the holder's part to fulfill any of the requirements herein set forth or made a part hereof, be retained by the United States to be applied as far as may be needed to the satisfaction of the holder's obligations assumed hereunder, without prejudice whatever to any other rights and remedies of the United States.
- c. Should the bond delivered under this instrument become unsatisfactory to the Authorized Officer, the holder shall, within 30 calendar days of demand, furnish a new bond. In the event of noncompliance with the terms and conditions of this instrument, the BLM will notify the holder that the surety or other bond instrument is subject to forfeiture and will allow the holder 15 calendar days to respond before action is taken to forfeit the bond and suspend or terminate the authorization.

5. Terms and Conditions:

- a. This instrument is issued subject to the holder's compliance with all applicable laws and regulations and, in particular, with the regulations contained in Title 43 Code of Federal Regulations Part 2800, including the terms and conditions required by 43 CFR 2805.12. Failure of the holder to comply with applicable law or regulations or any terms, conditions, or stipulations of this instrument shall constitute grounds for suspension or termination thereof. The Authorized Officer may change the

terms and conditions of this instrument as a result of changes in legislation, regulations, or as otherwise necessary to protect public health or safety or the environment in accordance with 43 CFR 2805.15(e).

- b. The right of-way Stipulations (Exhibit B), attached hereto, and the approved Final Plan of Development, are incorporated into and made a part of this instrument as fully and effectively as if they were set forth herein in their entirety.
- c. The holder shall perform all operations in a good and workmanlike manner, consistent with the approved Plan of Development, so as to ensure protection of the environment and the health and safety of the public. The Authorized Officer may order an immediate temporary suspension of operations, orally or in writing, in accordance with 43 CFR 2807.16 to protect public health or safety or the environment if the Authorized Officer determines that the holder has violated one or more of the terms, conditions, or stipulations of this instrument. An immediate temporary suspension order is effective until the holder receives a written Notice to Proceed from the Authorized Officer.
- d. The holder will not initiate any construction or other surface disturbing activities on the right-of-way without prior written authorization of the Authorized Officer. Such authorization will be a written Notice to Proceed (Form 2800-15) issued by the Authorized Officer or his/her delegated representative. Each Notice to Proceed will authorize construction or use and occupancy only as therein expressly stated and only for the particular location or use and occupancy therein described, i.e., a construction phase or site location. The Authorized Officer will issue a Notice to Proceed subject to such terms and conditions as deemed necessary when the design, construction, use, occupancy, and operation proposals are in conformity with the terms and conditions of this instrument.
- e. The holder shall start construction of the initial phase of development within 12 months after issuance of a Notice to Proceed but no later than 24 months after the effective date of the issuance of this right of way lease/grant. The holder shall complete construction within the timeframes approved in the Plan of Development, but no later than 24 months after start of construction, unless the project has been approved for phased development as provided for in paragraph (5)(f).
- f. If this right-of-way lease/grant and approved Plan of Development provides for a phased development, construction of each subsequent phase must begin within 3 years of the start of construction of the previous phase. A Notice to Proceed will be required to be issued by the Authorized Officer for each phase of development. The Notice to Proceed for a particular phase of development may be subject to the issuance of additional Notices to Proceed for specific activities within the particular development phase.
- g. During operations, the holder shall maintain all onsite electrical generation equipment and facilities in accordance with the design standards in the approved Plan of Development. Any idle, improperly functioning, or abandoned equipment or facilities that have been inoperative for any continuous period of 3 months or more must be repaired, placed into service, and/or removed from the site within 30 calendar days from receipt of a written Notice of Failure to Ensure Diligent Development from the Authorized Officer, unless the holder is provided an extension of time by the Authorized Officer. To obtain an extension of the 30-day deadline, the holder must submit a written request to the Authorized Officer and show therein good cause for any delays in repairs, use, or removal; an

estimate when corrective action will be completed; and evidence of diligent operation of the equipment and/or facilities.

- h. Failure of the holder to comply with any diligent development provision of this instrument may cause the Authorized Officer to suspend or terminate the authorization in accordance with 43 CFR 2807.17 - 2807.19, and use the posted Performance and Reclamation bond to cover the costs for removal of any equipment and/or facilities. The Authorized Officer will provide the holder a written Notice of Failure to Ensure Diligent Development prior to the suspension or termination of the authorization. The holder will be provided an opportunity to correct any noncompliance in accordance with 43 CFR 2807.18 or submit a written request to the Authorized Officer for an extension of the timelines in the approved Plan of Development.
- i. Upon termination by the Authorized Officer or expiration of this instrument, all improvements shall be removed from the public lands within 180 calendar days or otherwise disposed of as provided for in the approved Plan of Development, or as directed by the Authorized Officer.
- j. This instrument shall, at a minimum, be reviewed by the Authorized Officer at the end of the 10th year and at regular intervals thereafter not to exceed 10 years. Provided, however, that this instrument may be reviewed at any time deemed necessary by the Authorized Officer in accordance with the regulations.
- k. This instrument may be assigned consistent with the regulations, but all assignments are subject to approval by the Authorized Officer. In addition, the qualifications of all assignees must comply with the requirements of the regulations. A partial assignment of this instrument shall not be approved if such action would hinder the Authorized Officer's management of the authorization or the associated public lands.
- l. Upon the request of the Authorized Officer, the holder shall provide access to environmental, technical, and financial records, reports, and other information related to construction, operation, maintenance, and decommissioning of the right-of-way. Any information marked confidential or proprietary will be kept confidential to the extent allowed by law. Failure of the holder to cooperate with such request, provide data, or grant access to such records, reports, and information may, at the discretion of the Authorized Officer, result in suspension or termination of the right-of-way lease/grant in accordance with the regulations.
- m. The holder shall provide a survey and separate legal description for each Phase of the project area, as identified in Alternative 5.5 in the FEIS. The BLM shall have 45 days to review, verify and approve the survey and legal descriptions.

IN WITNESS WHEREOF, The undersigned agree to the terms and conditions of this right-of way.

Leticia R. Bellar

(Signature of Holder)

Vice President

(Title)

10/21/10

(Date)

Roxie Trost, Achy

(Signature of Authorized Officer)

Roxie Trost, Field Manager

(Title)

10/21/10

(Effective Date of Lease/Grant)

Attachments

Exhibit A: Legal Description and Map

Exhibit B: Stipulations

EXHIBIT A

LEGAL DESCRIPTION AND MAP

*Below is the legal description for the lands affected by the right-of-way grant/lease.*

Calico Solar Project CACA 49537

**LEGAL LAND DESCRIPTION – ENTIRE SITE**

Within Township 8 North, Range 5 East, San Bernardino Meridian:

Section 2: Lots 1 and 2 in the NE1/4, SE1/4;

Section 8: That portion of the N1/2, N1/2N1/2SE1/4 southerly of the southerly right-of-way of the Burlington Northern Santa Fe (BNSF) railroad and northerly of right of-way LA 0107127;

Section 10: S1/2, S1/2NE1/4 southerly of the southerly right-of-way of the BNSF railroad.

Section 11: NE1/4 excluding the BNSF right-of way, W1/2SW1/4NW1/4 southerly of the BNSF right-of-way, W1/2SW1/4, W1/2E1/2SW1/4, E1/2NE1/4SW1/4, N1/2SE1/4, E1/2SE1/4SE1/4;

Section 12: All section excluding the BNSF right-of way.

Section 14: NE1/4NE1/4NE1/4, W1/2NW1/4, W1/2E1/2NW1/4, SE1/4SE1/4NW1/4 northerly of the northerly right-of-way of Interstate 40 (I-40);

Section 15: N1/2N1/2, N1/2S1/2N1/2 northerly of the northerly right-of-way of I-40.

Within Township 8 North, Range 6 East, San Bernardino Meridian:

Section 5: A portion of SW1/4SW1/4, a portion of SW1/4SE1/4SW1/4;

Section 6: A portion of lot 2 in the NE1/4, a portion of lot 2 in the NW1/4, lot 1 in the NW1/4, lot 1 in the NE1/4, lot 2 in the SW1/4, lot 1 in the SW1/4, SE1/4;

Section 7: All section excluding the BNSF right-of-way;

Section 8: N1/2, SW1/4, NW1/4NE1/4SE1/4, NW1/4SE1/4, NW1/4SW1/4SE1/4, all portions westerly of SCE Transmission right-of-way;

Section 17: The NW portion westerly of SCE Transmission right of-way and excluding the BNSF right-of-way;

Section 18: NE1/4 excluding the BNSF right-of-way, Lot 1 in the NW1/4, N1/2 Lot 2 in the NW1/4, a portion of S1/2 of lot 2 in the NW1/4, a portion of N1/2 of lot 2 in the SW1/4, S1/2 of lot 2 Northerly of the northerly right-of way of I-40, lot 1 in the SW1/4 northerly of the northerly right-of-way of I-40, SE1/4 westerly of SCE Transmission right-of way.

Acres: 4604, more or less

*The exact project footprint (4604 acres) falls within this legal description and is subject to a metes and bounds survey, provided by the applicant. See attached map for detail.*

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## EXHIBIT B

## STIPULATIONS

1. The holder shall construct, operate, and maintain the facilities, improvements, and structures within this right-of-way in strict conformity with the approved Final Plan of Development, as amended or supplemented by approval of the Authorized Officer. Any relocation, additional construction, or use that is not in accord with the approved Final Plan of Development, shall not be initiated without the prior written approval of the Authorized Officer. A copy of the complete right-of-way authorization, including all stipulations and approved Final Plan of Development, shall be made available on the right-of-way area during construction, operation, and decommission. Noncompliance with the above will be grounds for immediate temporary suspension of activities if it constitutes a threat to public health and safety or the environment.
2. The holder shall comply with the CEC License and Conditions of Certification, issued by the California Energy Commission. Noncompliance with the requirements of the License and Conditions of Certification will be grounds for immediate temporary suspension of activities and operations within the right-of-way by the Authorized Officer.
3. The holder shall comply with the Biological Opinion/Conference Opinion dated October 15, 2010 for listed and proposed species associated with this project signed by the US Fish and Wildlife Service. Failure to comply with the requirements of the Biological Opinion/Conference Opinion shall be cause for suspension or termination of the right-of-way authorization.
4. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.
5. The holder shall comply with the construction practices and mitigating measures established by Army Corps of Engineers as set forth in the parameters for the individuals permit required by Section 404 of the Clean Water Act. The holder shall obtain the required individual permit from the appropriate office of the Army Corps of Engineers and provide the Authorized Officer with a copy of same. Failure to comply with this requirement shall be cause for suspension or termination of the right-of-way authorization.
6. Unless otherwise agreed to in writing by the Authorized Officer, powerlines shall be constructed in accordance to standards outlined in "Suggested Practices for Raptor Protection on Powerlines", Raptor Research Foundation, Inc., 1996. The holder shall assume the burden and expense of proving that pole designs not shown in the above publication are "eagle safe." Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modifications or additions to all power line structures placed on this right-of-way, should they be necessary to ensure the

safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

7. The holder will arrange and attend preconstruction conference(s) prior to the holder's commencing construction and/or surface disturbing activities on the right-of-way or specific construction phase of the right of way as specified by the Authorized Officer. The holder and/or his representatives will attend this conference. The holder's contractor, or agents involved with construction and/or any surface disturbing activities associated with the right-of-way, will also attend this conference to review the stipulations of the authorization, including the Plan of Development, as applicable. The holder shall notify the Authorized Officer of the schedule for any preconstruction conference at least 10 calendar days in advance of the preconstruction conference or such timeframe as may be required by the Notice(s) to Proceed.
8. The holder shall designate a representative who shall have the authority to act upon and to implement instructions from the Authorized Officer. The holder's representative shall be available for communication with the Authorized Officer within a reasonable time when construction or other surface disturbing activities are underway.
9. The holder shall protect all survey markers found within the right-of-way. Survey markers include, but are not limited to, Public Land Survey System line and corner markers, other property boundary line and corner markers, and horizontal and vertical geodetic monuments. In the event of obliteration or disturbance of any of the above, the holder shall immediately report the incident, in writing, to the Authorized Officer and the respective installing authority if known. Where any of the above survey markers are obliterated or disturbed during operations, the Authorized Officer will determine how the marker is to be restored. The holder will be instructed to secure the services of a registered land surveyor or informed that an official survey will be executed by the Bureau of Land Management (BLM). All surveying activities will be in conformance with the Manual of Surveying Instructions and appropriate State laws and regulations. Surveys by registered land surveyors will be examined by the Authorized Officer and the BLM State Office Chief Cadastral Surveyor for conformance with the Manual of Surveying Instructions and State laws and regulations before being filed in the appropriate State or county offices of record. The holder shall be responsible for all administrative and survey costs.
10. Use of pesticides and herbicides shall comply with all applicable Federal and State laws. Pesticides and herbicides shall be used only in accordance with their registered uses within limitations imposed by the Secretary of the Interior. Prior to the use of the pesticides, the holder shall obtain from the Authorized Officer, written approval of a Pesticide Use Proposal Plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, locations of storage and disposal of containers, and any other information deemed necessary by the Authorized Officer.
11. Only those chemicals (pesticides and herbicides) listed on the BLM approved label list are authorized for use on public lands. A Pesticide Use Proposal (PUP) must be submitted for each chemical used, and it cannot be used until approval has been obtained in writing from the Authorized Officer. The report needs to include any surfactants or dyes used in the spraying operation. Applicator(s) of chemicals used must have completed the pesticide certification training and have a current up to date Certified Pesticide Applicator's License. Pesticide and herbicide application records for the areas and acres treated must be submitted to the Authorized Officer each year. This includes the following:

Brand or Product name  
EPA registration number  
Total amount applied (use rate #A.I./acre)  
Date of application  
Location of application  
Size of area treated  
Method of treatment (air/ground)  
Name of applicator  
Certification number and dates  
Costs to treatment  
Amount of surfactants or dyes used in spraying operation

The record information must be recorded no later than 14 calendar days following the pesticide or herbicide application and must be maintained for ten years.

12. Construction sites shall be maintained in a sanitary condition at all times; waste materials at those sites shall be disposed of promptly at an appropriate waste disposal site. 'Waste' means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment. A litter policing program shall be implemented by the holder which covers all roads and sites associated with the right of way.
13. The holder shall comply with all applicable Federal, State, and local laws and regulations, existing or hereafter enacted or promulgated, with regard to any hazardous materials, as defined by 43 CFR 2801.5 that will be used, produced, or transported on or within the right-of-way, or used in the construction, operation, maintenance, or decommissioning of the right of way or any of its facilities. The holder agrees in accordance with 43 CFR 2807.12(e) to fully indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601 et seq., or the Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6901 et seq.) on the right-of-way (unless the release or threatened release is wholly unrelated to the right-of-way holder's activity on the right-of-way). This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.
14. Within 120 calendar days of completion of construction, the holder will submit to the Authorized Officer, as-built drawings and a certification of construction verifying that the facility has been constructed in accordance with the design, plans, specifications, and applicable laws and regulations.
15. The holder will be liable for all fire suppression costs resulting from fires caused during construction or operations. The holder shall comply with all guidelines and restrictions imposed by agency fire control officials.
16. The holder shall fund in accordance with 43 CFR 2805.16 a third party Compliance and Inspection Program as deemed necessary by the Authorized Officer to ensure compliance with the terms, conditions, and stipulations of this right of-way lease/grant and applicable laws and regulations.

17. Bald and/or golden eagles may now or hereafter be found to utilize the project area. The BLM will not issue a notice to proceed for any project that is likely to result in take of bald eagles and/or golden eagles until the applicant completes its obligation under applicable requirements of the Eagle Act, including completion of any required procedure for coordination with the FWS or any required permit. The BLM hereby notifies the applicant that compliance with the Eagle Act is a dynamic and adaptable process which may require the applicant to conduct further analysis and mitigation following assessment of operational impacts. Any additional analysis or mitigation required to comply with the Eagle Act will be developed with the FWS and coordinated with the BLM.
18. The holder shall comply with the Environmental and Construction Compliance Monitoring Plan.
19. The holder shall comply with the Executed Programmatic Agreement, signed and dated on September 21, 2010. Noncompliance with the requirements of the will be grounds for immediate temporary suspension of activities and operations within the right-of way by the Authorized Officer.
20. Upon discovery of human remains in California, all work in the area must cease immediately, nothing disturbed and the area is to be secured. The County Coroner's Office of the county where the remains were located must be called. The Coroner has two working days to examine the remains after notification. The appropriate land manager/owner or the site shall also be called and informed of the discovery.

If the remains are located on federal lands, federal land managers/federal law enforcement/federal archaeologist are to be informed as well because of complementary jurisdiction issues. It is very important that the suspected remains and the area around them remain undisturbed and the proper authorities called to the scene as soon as possible as it could be a crime scene.

The Coroner will determine if the bones are historic/archaeological or a modern legal case.

#### Modern Remains

If the Coroner's Office determines the remains are of modern origin, the appropriate law enforcement officials will be called by the Coroner and conduct the required procedures. Work will not resume until law enforcement has released the area.

#### Archaeological Remains

If the remains are determined to be archaeological in origin and there is no legal question, the protocol changes depending on whether the discovery site is located on federally or non-federally owned/managed lands.

After the Coroner has determined the remains are archaeological or historic and there is no legal question, the appropriate Field Office Archaeologist must be called. The archaeologist will initiate the proper procedures under ARPA and/or NAGPRA. If the remains can be determined to be Native American, the steps as outlined in NAGPRA, 43 CFR 10.6 Inadvertent discoveries, must be followed.

## **Exhibit D**



**United States Department of the Interior**  
**BUREAU OF LAND MANAGEMENT**

California Desert District  
22835 Calle San Juan De Los Lagos  
Moreno Valley, CA 92553-9046  
[www.ca.blm.gov](http://www.ca.blm.gov)



CACA-049537  
2850 (910)  
CAD000.46

FEB 24 2011

CERTIFIED MAIL NO. 7008 0150 0002 1911 3718  
RETURN RECEIPT REQUESTED

Ref: Grant CACA-049537

**NOTICE**

Mr. Sean Gallagher  
Calico Solar LLC (K-Road Power)  
2600 Tenth St. Suite 635  
Berkeley, CA 94710

Calico Solar Project  
Right-of-Way  
Serial No: CACA-049537

**Notice of Intent to Terminate ROW Grant and Opportunity to Correct Noncompliance with  
Applicable Regulations, Terms and Conditions of Grant**

On October 20, 2010 the Right-of-Way (ROW) Serial Number CACA-049537 was granted to Calico Solar, LLC (Calico Solar) under the Federal Land Policy and Management Act of October 21, 1976 (90 Stat. 2776; 43 USC 1761) (FLPMA) for the purpose of constructing, operating, maintaining and terminating a 663.5 megawatt concentrated solar power electrical generation project identified as the Calico Solar Project. As approved, power would be generated by Stirling Energy Systems (SES) SunCatcher technology. Calico Solar, LLC is a subsidiary of Tessera Solar of Houston, Texas. The right-of-way (ROW) affects public lands described on the attached Exhibit A.

This Notice serves two purposes: 1) to provide the ROW holder written notice of the Bureau of Land Management's (BLM) intent to terminate the ROW Grant based upon the failure of Calico Solar, LLC to maintain its qualifications to hold the ROW Grant and/or to seek an amendment of it, and 2) to provide the ROW holder a reasonable opportunity to correct its noncompliance with applicable regulations, terms and conditions of the ROW Grant [at 43 Code of Federal Regulations (CFR) § 2807.18(a)].

Under the terms and conditions of the ROW Grant, the ROW instrument is issued subject to the holder's compliance with all applicable laws and regulations and, in particular, with the regulations contained in Title 43 CFR Part 2800 (CACA-049537, sec.5a). In accordance with 43 CFR 2803.10(b), the holder of a grant must be technically and financially able to construct, operate, maintain and terminate the use of the public lands being applied for. Under 43 CFR 2807.20(a), you must seek to amend your grant when there is a proposed substantial deviation in location or use. You may assign your grant with BLM approval 43 CFR 2807.21(a). The assignment application must include documentation that the assignor agrees to comply with and be bound by the terms and conditions of the (current) grant that is being assigned and all applicable laws and regulations. Also under the regulations, at 43 CFR 2807.17(a), and according to the ROW Grant, failure to comply with the terms, conditions, or stipulations of the ROW instrument shall be grounds for termination (CACA 049537, sec.5a). According to the ROW Grant, the approved Final Plan of Development (POD) is incorporated into and made a part of the ROW Grant (CACA 49537, sec.5b).

Pursuant to 2804.12(a)(5) Calico Solar completed its application to BLM on Standard Form 299 providing a statement of financial and technical capability to construct, operate, maintain, and terminate the Calico Solar Project utilizing the Stirling Engine Systems' SunCatcher technology. In addition, Calico Solar provided a statement of technical and financial capability in its POD, which was relied upon by the BLM in its approval of the proposed Calico Solar project (Record of Decision (ROD)). Funding for the Calico Solar Project was to be provided by (NTR) (Id.).

The sale of Calico Solar, LLC and the Calico Solar Project by Tessera Solar to K-Road Power is known and public record. Statements have been made to BLM that the use of Stirling Energy Systems SunCatcher technology at the Calico Solar Project site is unlikely. The technical capability of Calico Solar to hold this FLPMA ROW grant was premised upon the ability of Calico Solar to utilize SunCatcher solar technology at the approved project site. BLM has not received an application to amend the ROW grant, or an application to assign the ROW grant.

The issuance of the FLPMA ROW grant to Calico Solar, LLC has been premised upon its financial capability to construct, operate, maintain, and decommission or terminate the project. The recent actions taken indicate that Calico Solar, LLC potentially may be unable to comply with the FLPMA authorization, and/or financial and technical requirements of the regulations, the approved ROW Grant, the ROD, and the POD.

By this Notice, Calico Solar, LLC is being provided 30 days to correct its noncompliance with the requirement to be technically and financially able to construct, operate, maintain and terminate the Calico Solar Project as authorized by the FLPMA ROW grant. During this same period of time, Calico Solar, LLC is to provide BLM a request for assignment and/or amendment or an explanation why one or both are not required. Please be advised that responsive documentation should include parent company information, financing information, technological capability, articles of incorporation, corporate or company resolutions, and the like. The failure to comply with 43 CFR 2807.17(a), 2807.18(a), 2807.20, 2807.21, and this Notice may result in the termination of the ROW grant.

Sincerely,

A handwritten signature in black ink, appearing to read "Teresa A. Raml". The signature is fluid and cursive, with the first name "Teresa" being more prominent than the last name "Raml".

Teresa A. Raml  
District Manager – California Desert

Enclosure:  
Grant CAC-049537



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
RIGHT OF-WAY LEASE/GRANT

SERIAL NUMBER CACA-49537

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1. As authorized by the Record of Decision for the Calico Solar LLC, a right-of way lease/grant is hereby issued pursuant to Title V of the Federal Land Policy and Management Act of October 21, 1976 (90 Stat. 2776; 43 U.S.C. 1761) and the Bureau of Land Management right of-way regulations (43 CFR Part 2800).

2. Nature of Interest:

a. By this instrument, the holder:

Calico Solar, LLC  
4800 North Scottsdale Road, Ste. 5500  
Scottsdale, AZ 85251 7639

receives a right to use and occupy the following described public lands to construct, operate, maintain, and decommission a 663.5 MW thermal concentrated solar power electric generation project, and its ancillary facilities as described in the approved Plan of Development (POD):

See attached legal description and map (Exhibit A).

- b. The instrument issued herein consists of a concentrated thermal solar power facility, generation-tie transmission line, project site perimeter road and auxiliary facilities, and contains 4,604 acres, more or less.
- c. This instrument for the thermal concentrated solar power electric generation project, and its ancillary facilities shall expire on December 31, 2039, 30 years from its effective date, unless, prior thereto, it is relinquished, abandoned, or terminated pursuant to the terms and conditions of this instrument or of any applicable Federal law or regulation.
- d. This instrument may be renewed by the Authorized Officer. The holder is required to submit an application for renewal at least 120 calendar days prior to the expiration date of this instrument. The Authorized Officer will review the application for renewal to ensure the holder is complying with the terms, conditions, and stipulations of this instrument and applicable laws and regulations. If renewed, the right of-way shall be subject to the regulations existing at the time of renewal and any other terms and conditions that the Authorized Officer deems necessary to protect the public interest.

- e. Notwithstanding the renewal, expiration, relinquishment, abandonment, or termination of this instrument, the provisions of this instrument, to the extent applicable, shall continue in effect and shall be binding on the holder, its successors, or assigns, until they have fully satisfied the obligations and/or liabilities accruing herein before or on account of the renewal, expiration, relinquishment, abandonment, or termination of this authorization.
- f. The Authorized Officer retains the right of access to the lands included within the right-of-way at any time and may enter any facility on the right of-way in accordance with 43 CFR 2805.15(a). The holder shall pay monitoring fees in accordance with 43 CFR 2805.16 as specified in the master agreement with BLM for the reasonable costs incurred in monitoring the construction, operation, maintenance, and decommission of the right of way.
- g. This instrument is issued subject to valid existing rights in accordance with 43 CFR 2805.14.

3. Rental:

- a. For and in consideration of the rights granted, the holder agrees to pay the Bureau of Land Management the fair market value of the right-of way, which includes both base rent and a megawatt capacity fee, as determined by the Authorized Officer unless specifically exempted from such payment by law or regulation. Provided, however, that the rental may be adjusted by the Authorized Officer, whenever necessary, to reflect changes in fair market value as determined by the application of sound business management principles, and so far as practicable and feasible, in accordance with comparable commercial practices. The rental provisions of this authorization may also be modified consistent with the provisions of any regulatory changes or pursuant to the provisions of any new or revised statutory authorities.
- b. The rental includes an annual base rent for the acreage of the public land included in the authorization and a megawatt capacity fee based on the authorized megawatt capacity of the approved solar energy facilities. The base rent is due and payable upon the date of issuance of this instrument and will be paid on an annual basis consistent with the regulations. The base rent will be adjusted each year based on the Implicit Price Deflator Gross Domestic Product (IPD GDP) index. The megawatt capacity fee is based on the authorized megawatt capacity approved by the Authorized Officer, or an approved phase of development, and will be paid on an annual basis upon the start of electric generation from the solar energy facilities. The megawatt capacity fee will be phased in over a 5 year period after the start of electric generation (at the rate of 20 percent the first year, 40 percent the second year, 60 percent the third year, 80 percent the fourth year, and 100 percent the fifth and subsequent years of operations). The 5 year phase-in period will apply separately to each phase of development as approved by the Authorized Officer. The Calico Solar Rental Payment Proposal authorized by the California State Director approves the MW Capacity Fee payment for quarterly annual for actual capacity that begins generation.

4. Bond:

- a. A Performance and Reclamation bond, in an amount determined by the Authorized Officer, shall be obtained by the holder to ensure compliance with the terms and conditions of this instrument. The Authorized Officer will require that the holder submit a Reclamation Cost Estimate for review and to assist the Authorized Officer in determining the bond amount. The holder shall provide the Authorized Officer proof that a bond in the required amount has been obtained by such date as specified by the Authorized Officer. The amount of the bond will be limited to the anticipated liabilities associated with the activities approved by the Notice to Proceed. If the Notice to Proceed is limited to only an initial phase of development or activity, the bond amount will be limited to that phase or activity. The bond amount would increase with the issuance of a Notice to Proceed for future phases of development or additional activities. The bond must be maintained in effect until removal of improvements and restoration of the right-of way has been accepted by the Authorized Officer. Acceptable bond instruments include cash, cashier's or certified check, certificate or book entry deposits, negotiable U.S. Treasury securities (notes, bills, or bonds) equal in value to the bond amount, surety bonds from the approved list of sureties (U.S. Treasury Circular 570) payable to the Bureau of Land Management (BLM), irrevocable letters of credit payable to the BLM issued by financial institutions that have the authority to issue letters of credit and whose operations are regulated and examined by a federal agency, or a policy of insurance that provides BLM with acceptable rights as a beneficiary and is issued by an insurance carrier that has the authority to issue insurance policies in the applicable jurisdiction and whose insurance operations are regulated and examined by a federal or state agency. The Authorized Officer will not accept a corporate guarantee as an acceptable form of bond. The Authorized Officer will review the bond on an annual basis to ensure adequacy of the bond amount. The bond will also be reviewed at the time of any assignment, modification, or renewal of this instrument. The Authorized Officer may increase or decrease the bond amount at any time during the term of the right of-way authorization, consistent with the regulations.
- b. The holder agrees that any bond held as security for holder's performance of the terms and conditions of this instrument may, upon failure on the holder's part to fulfill any of the requirements herein set forth or made a part hereof, be retained by the United States to be applied as far as may be needed to the satisfaction of the holder's obligations assumed hereunder, without prejudice whatever to any other rights and remedies of the United States.
- c. Should the bond delivered under this instrument become unsatisfactory to the Authorized Officer, the holder shall, within 30 calendar days of demand, furnish a new bond. In the event of noncompliance with the terms and conditions of this instrument, the BLM will notify the holder that the surety or other bond instrument is subject to forfeiture and will allow the holder 15 calendar days to respond before action is taken to forfeit the bond and suspend or terminate the authorization.

5. Terms and Conditions:

- a. This instrument is issued subject to the holder's compliance with all applicable laws and regulations and, in particular, with the regulations contained in Title 43 Code of Federal Regulations Part 2800, including the terms and conditions required by 43 CFR 2805.12. Failure of the holder to comply with applicable law or regulations or any terms, conditions, or stipulations of this instrument shall constitute grounds for suspension or termination thereof. The Authorized Officer may change the

terms and conditions of this instrument as a result of changes in legislation, regulations, or as otherwise necessary to protect public health or safety or the environment in accordance with 43 CFR 2805.15(e).

- b. The right of-way Stipulations (Exhibit B), attached hereto, and the approved Final Plan of Development, are incorporated into and made a part of this instrument as fully and effectively as if they were set forth herein in their entirety.
- c. The holder shall perform all operations in a good and workmanlike manner, consistent with the approved Plan of Development, so as to ensure protection of the environment and the health and safety of the public. The Authorized Officer may order an immediate temporary suspension of operations, orally or in writing, in accordance with 43 CFR 2807.16 to protect public health or safety or the environment if the Authorized Officer determines that the holder has violated one or more of the terms, conditions, or stipulations of this instrument. An immediate temporary suspension order is effective until the holder receives a written Notice to Proceed from the Authorized Officer.
- d. The holder will not initiate any construction or other surface disturbing activities on the right-of-way without prior written authorization of the Authorized Officer. Such authorization will be a written Notice to Proceed (Form 2800-15) issued by the Authorized Officer or his/her delegated representative. Each Notice to Proceed will authorize construction or use and occupancy only as therein expressly stated and only for the particular location or use and occupancy therein described, i.e., a construction phase or site location. The Authorized Officer will issue a Notice to Proceed subject to such terms and conditions as deemed necessary when the design, construction, use, occupancy, and operation proposals are in conformity with the terms and conditions of this instrument.
- e. The holder shall start construction of the initial phase of development within 12 months after issuance of a Notice to Proceed but no later than 24 months after the effective date of the issuance of this right of way lease/grant. The holder shall complete construction within the timeframes approved in the Plan of Development, but no later than 24 months after start of construction, unless the project has been approved for phased development as provided for in paragraph (5)(f).
- f. If this right-of-way lease/grant and approved Plan of Development provides for a phased development, construction of each subsequent phase must begin within 3 years of the start of construction of the previous phase. A Notice to Proceed will be required to be issued by the Authorized Officer for each phase of development. The Notice to Proceed for a particular phase of development may be subject to the issuance of additional Notices to Proceed for specific activities within the particular development phase.
- g. During operations, the holder shall maintain all onsite electrical generation equipment and facilities in accordance with the design standards in the approved Plan of Development. Any idle, improperly functioning, or abandoned equipment or facilities that have been inoperative for any continuous period of 3 months or more must be repaired, placed into service, and/or removed from the site within 30 calendar days from receipt of a written Notice of Failure to Ensure Diligent Development from the Authorized Officer, unless the holder is provided an extension of time by the Authorized Officer. To obtain an extension of the 30-day deadline, the holder must submit a written request to the Authorized Officer and show therein good cause for any delays in repairs, use, or removal; an

estimate when corrective action will be completed; and evidence of diligent operation of the equipment and/or facilities.

- h. Failure of the holder to comply with any diligent development provision of this instrument may cause the Authorized Officer to suspend or terminate the authorization in accordance with 43 CFR 2807.17 - 2807.19, and use the posted Performance and Reclamation bond to cover the costs for removal of any equipment and/or facilities. The Authorized Officer will provide the holder a written Notice of Failure to Ensure Diligent Development prior to the suspension or termination of the authorization. The holder will be provided an opportunity to correct any noncompliance in accordance with 43 CFR 2807.18 or submit a written request to the Authorized Officer for an extension of the timelines in the approved Plan of Development.
- i. Upon termination by the Authorized Officer or expiration of this instrument, all improvements shall be removed from the public lands within 180 calendar days or otherwise disposed of as provided for in the approved Plan of Development, or as directed by the Authorized Officer.
- j. This instrument shall, at a minimum, be reviewed by the Authorized Officer at the end of the 10th year and at regular intervals thereafter not to exceed 10 years. Provided, however, that this instrument may be reviewed at any time deemed necessary by the Authorized Officer in accordance with the regulations.
- k. This instrument may be assigned consistent with the regulations, but all assignments are subject to approval by the Authorized Officer. In addition, the qualifications of all assignees must comply with the requirements of the regulations. A partial assignment of this instrument shall not be approved if such action would hinder the Authorized Officer's management of the authorization or the associated public lands.
- l. Upon the request of the Authorized Officer, the holder shall provide access to environmental, technical, and financial records, reports, and other information related to construction, operation, maintenance, and decommissioning of the right-of-way. Any information marked confidential or proprietary will be kept confidential to the extent allowed by law. Failure of the holder to cooperate with such request, provide data, or grant access to such records, reports, and information may, at the discretion of the Authorized Officer, result in suspension or termination of the right-of-way lease/grant in accordance with the regulations.
- m. The holder shall provide a survey and separate legal description for each Phase of the project area, as identified in Alternative 5.5 in the FEIS. The BLM shall have 45 days to review, verify and approve the survey and legal descriptions.

IN WITNESS WHEREOF, The undersigned agree to the terms and conditions of this right-of way.

*Felicia R. Bellar*  
(Signature of Holder)

Vice President  
(Title)

10/21/10  
(Date)

*Roxie Trost*  
(Signature of Authorized Officer)

Roxie Trost, Field Manager  
(Title)

10/21/10  
(Effective Date of Lease/Grant)

**Attachments**

Exhibit A: Legal Description and Map

Exhibit B: Stipulations

EXHIBIT A

LEGAL DESCRIPTION AND MAP

*Below is the legal description for the lands affected by the right-of-way grant/lease.*

Calico Solar Project CACA 49537

**LEGAL LAND DESCRIPTION – ENTIRE SITE**

Within Township 8 North, Range 5 East, San Bernardino Meridian:

Section 2: Lots 1 and 2 in the NE1/4, SE1/4;

Section 8: That portion of the N1/2, N1/2N1/2SE1/4 southerly of the southerly right-of-way of the Burlington Northern Santa Fe (BNSF) railroad and northerly of right of-way LA 0107127;

Section 10: S1/2, S1/2NE1/4 southerly of the southerly right-of-way of the BNSF railroad.

Section 11: NE1/4 excluding the BNSF right-of way, W1/2SW1/4NW1/4 southerly of the BNSF right-of-way, W1/2SW1/4, W1/2E1/2SW1/4, E1/2NE1/4SW1/4, N1/2SE1/4, E1/2SE1/4SE1/4;

Section 12: All section excluding the BNSF right-of way.

Section 14: NE1/4NE1/4NE1/4, W1/2NW1/4, W1/2E1/2NW1/4, SE1/4SE1/4NW1/4 northerly of the northerly right-of-way of Interstate 40 (I-40);

Section 15: N1/2N1/2, N1/2S1/2N1/2 northerly of the northerly right-of-way of I-40.

Within Township 8 North, Range 6 East, San Bernardino Meridian:

Section 5: A portion of SW1/4SW1/4, a portion of SW1/4SE1/4SW1/4;

Section 6: A portion of lot 2 in the NE1/4, a portion of lot 2 in the NW1/4, lot 1 in the NW1/4, lot 1 in the NE1/4, lot 2 in the SW1/4, lot 1 in the SW1/4, SE1/4;

Section 7: All section excluding the BNSF right-of-way;

Section 8: N1/2, SW1/4, NW1/4NE1/4SE1/4, NW1/4SE1/4, NW1/4SW1/4SE1/4, all portions westerly of SCE Transmission right-of-way;

Section 17: The NW portion westerly of SCE Transmission right of-way and excluding the BNSF right-of-way;

Section 18: NE1/4 excluding the BNSF right-of-way, Lot 1 in the NW1/4, N1/2 Lot 2 in the NW1/4, a portion of S1/2 of lot 2 in the NW1/4, a portion of N1/2 of lot 2 in the SW1/4, S1/2 of lot 2 Northerly of the northerly right-of way of I-40, lot 1 in the SW1/4 northerly of the northerly right-of-way of I-40, SE1/4 westerly of SCE Transmission right-of way.

Acres: 4604, more or less

*The exact project footprint (4604 acres) falls within this legal description and is subject to a metes and bounds survey, provided by the applicant. See attached map for detail.*

188,34





## EXHIBIT B

## STIPULATIONS

1. The holder shall construct, operate, and maintain the facilities, improvements, and structures within this right-of-way in strict conformity with the approved Final Plan of Development, as amended or supplemented by approval of the Authorized Officer. Any relocation, additional construction, or use that is not in accord with the approved Final Plan of Development, shall not be initiated without the prior written approval of the Authorized Officer. A copy of the complete right-of-way authorization, including all stipulations and approved Final Plan of Development, shall be made available on the right-of-way area during construction, operation, and decommission. Noncompliance with the above will be grounds for immediate temporary suspension of activities if it constitutes a threat to public health and safety or the environment.
2. The holder shall comply with the CEC License and Conditions of Certification, issued by the California Energy Commission. Noncompliance with the requirements of the License and Conditions of Certification will be grounds for immediate temporary suspension of activities and operations within the right-of-way by the Authorized Officer.
3. The holder shall comply with the Biological Opinion/Conference Opinion dated October 15, 2010 for listed and proposed species associated with this project signed by the US Fish and Wildlife Service. Failure to comply with the requirements of the Biological Opinion/Conference Opinion shall be cause for suspension or termination of the right-of-way authorization.
4. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.
5. The holder shall comply with the construction practices and mitigating measures established by Army Corps of Engineers as set forth in the parameters for the individuals permit required by Section 404 of the Clean Water Act. The holder shall obtain the required individual permit from the appropriate office of the Army Corps of Engineers and provide the Authorized Officer with a copy of same. Failure to comply with this requirement shall be cause for suspension or termination of the right-of-way authorization.
6. Unless otherwise agreed to in writing by the Authorized Officer, powerlines shall be constructed in accordance to standards outlined in "Suggested Practices for Raptor Protection on Powerlines", Raptor Research Foundation, Inc., 1996. The holder shall assume the burden and expense of proving that pole designs not shown in the above publication are "eagle safe." Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modifications or additions to all power line structures placed on this right-of-way, should they be necessary to ensure the

safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

7. The holder will arrange and attend preconstruction conference(s) prior to the holder's commencing construction and/or surface disturbing activities on the right-of-way or specific construction phase of the right of way as specified by the Authorized Officer. The holder and/or his representatives will attend this conference. The holder's contractor, or agents involved with construction and/or any surface disturbing activities associated with the right-of-way, will also attend this conference to review the stipulations of the authorization, including the Plan of Development, as applicable. The holder shall notify the Authorized Officer of the schedule for any preconstruction conference at least 10 calendar days in advance of the preconstruction conference or such timeframe as may be required by the Notice(s) to Proceed.
8. The holder shall designate a representative who shall have the authority to act upon and to implement instructions from the Authorized Officer. The holder's representative shall be available for communication with the Authorized Officer within a reasonable time when construction or other surface disturbing activities are underway.
9. The holder shall protect all survey markers found within the right-of-way. Survey markers include, but are not limited to, Public Land Survey System line and corner markers, other property boundary line and corner markers, and horizontal and vertical geodetic monuments. In the event of obliteration or disturbance of any of the above, the holder shall immediately report the incident, in writing, to the Authorized Officer and the respective installing authority if known. Where any of the above survey markers are obliterated or disturbed during operations, the Authorized Officer will determine how the marker is to be restored. The holder will be instructed to secure the services of a registered land surveyor or informed that an official survey will be executed by the Bureau of Land Management (BLM). All surveying activities will be in conformance with the Manual of Surveying Instructions and appropriate State laws and regulations. Surveys by registered land surveyors will be examined by the Authorized Officer and the BLM State Office Chief Cadastral Surveyor for conformance with the Manual of Surveying Instructions and State laws and regulations before being filed in the appropriate State or county offices of record. The holder shall be responsible for all administrative and survey costs.
10. Use of pesticides and herbicides shall comply with all applicable Federal and State laws. Pesticides and herbicides shall be used only in accordance with their registered uses within limitations imposed by the Secretary of the Interior. Prior to the use of the pesticides, the holder shall obtain from the Authorized Officer, written approval of a Pesticide Use Proposal Plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, locations of storage and disposal of containers, and any other information deemed necessary by the Authorized Officer.
11. Only those chemicals (pesticides and herbicides) listed on the BLM approved label list are authorized for use on public lands. A Pesticide Use Proposal (PUP) must be submitted for each chemical used, and it cannot be used until approval has been obtained in writing from the Authorized Officer. The report needs to include any surfactants or dyes used in the spraying operation. Applicator(s) of chemicals used must have completed the pesticide certification training and have a current up to date Certified Pesticide Applicator's License. Pesticide and herbicide application records for the areas and acres treated must be submitted to the Authorized Officer each year. This includes the following:

Brand or Product name  
EPA registration number  
Total amount applied (use rate #A.I./acre)  
Date of application  
Location of application  
Size of area treated  
Method of treatment (air/ground)  
Name of applicator  
Certification number and dates  
Costs to treatment  
Amount of surfactants or dyes used in spraying operation

The record information must be recorded no later than 14 calendar days following the pesticide or herbicide application and must be maintained for ten years.

12. Construction sites shall be maintained in a sanitary condition at all times; waste materials at those sites shall be disposed of promptly at an appropriate waste disposal site. 'Waste' means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment. A litter policing program shall be implemented by the holder which covers all roads and sites associated with the right of way.
13. The holder shall comply with all applicable Federal, State, and local laws and regulations, existing or hereafter enacted or promulgated, with regard to any hazardous materials, as defined by 43 CFR 2801.5 that will be used, produced, or transported on or within the right-of-way, or used in the construction, operation, maintenance, or decommissioning of the right of way or any of its facilities. The holder agrees in accordance with 43 CFR 2807.12(e) to fully indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601 et seq., or the Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6901 et seq.) on the right-of-way (unless the release or threatened release is wholly unrelated to the right-of-way holder's activity on the right-of-way). This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.
14. Within 120 calendar days of completion of construction, the holder will submit to the Authorized Officer, as-built drawings and a certification of construction verifying that the facility has been constructed in accordance with the design, plans, specifications, and applicable laws and regulations.
15. The holder will be liable for all fire suppression costs resulting from fires caused during construction or operations. The holder shall comply with all guidelines and restrictions imposed by agency fire control officials.
16. The holder shall fund in accordance with 43 CFR 2805.16 a third party Compliance and Inspection Program as deemed necessary by the Authorized Officer to ensure compliance with the terms, conditions, and stipulations of this right of-way lease/grant and applicable laws and regulations.

17. Bald and/or golden eagles may now or hereafter be found to utilize the project area. The BLM will not issue a notice to proceed for any project that is likely to result in take of bald eagles and/or golden eagles until the applicant completes its obligation under applicable requirements of the Eagle Act, including completion of any required procedure for coordination with the FWS or any required permit. The BLM hereby notifies the applicant that compliance with the Eagle Act is a dynamic and adaptable process which may require the applicant to conduct further analysis and mitigation following assessment of operational impacts. Any additional analysis or mitigation required to comply with the Eagle Act will be developed with the FWS and coordinated with the BLM.
18. The holder shall comply with the Environmental and Construction Compliance Monitoring Plan.
19. The holder shall comply with the Executed Programmatic Agreement, signed and dated on September 21, 2010. Noncompliance with the requirements of the will be grounds for immediate temporary suspension of activities and operations within the right-of way by the Authorized Officer.
20. Upon discovery of human remains in California, all work in the area must cease immediately, nothing disturbed and the area is to be secured. The County Coroner's Office of the county where the remains were located must be called. The Coroner has two working days to examine the remains after notification. The appropriate land manager/owner or the site shall also be called and informed of the discovery.

If the remains are located on federal lands, federal land managers/federal law enforcement/federal archaeologist are to be informed as well because of complementary jurisdiction issues. It is very important that the suspected remains and the area around them remain undisturbed and the proper authorities called to the scene as soon as possible as it could be a crime scene.

The Coroner will determine if the bones are historic/archaeological or a modern legal case.

#### **Modern Remains**

If the Coroner's Office determines the remains are of modern origin, the appropriate law enforcement officials will be called by the Coroner and conduct the required procedures. Work will not resume until law enforcement has released the area.

#### **Archaeological Remains**

If the remains are determined to be archaeological in origin and there is no legal question, the protocol changes depending on whether the discovery site is located on federally or non-federally owned/managed lands.

After the Coroner has determined the remains are archaeological or historic and there is no legal question, the appropriate Field Office Archaeologist must be called. The archaeologist will initiate the proper procedures under ARPA and/or NAGPRA. If the remains can be determined to be Native American, the steps as outlined in NAGPRA, 43 CFR 10.6 Inadvertent discoveries, must be followed.

# **Exhibit E**



**United States Department of the Interior**  
**BUREAU OF LAND MANAGEMENT**  
California Desert District  
22835 Calle San Juan De Los Lagos  
Moreno Valley CA 92553-9046  
[www.ca.blm.gov](http://www.ca.blm.gov)



***In Reply Refer to:***  
***3031 (P)***  
***CAD000.06***

APR 28 2011

**RETURN RECEIPT REQUESTED**  
**CERTIFIED MAIL NO. 7009 1410 0001 4383 1387**

Daniel J. O'Shea  
Calico Solar, LLC.  
2600 10<sup>th</sup> Street, Ste 635  
Berkeley, CA 94710

**Application for Amendment Received and Request for Additional Information.**

In a Notice of Intent (NOI) dated February 24, 2011, the BLM advised Calico Solar, LLC that a 30-day opportunity to correct right-of-way grant noncompliance was being afforded and requested information related to the technical and financial capability of the company to hold the Calico Solar right-of-way (ROW) grant.

On March 29, 2011, Calico Solar, LLC responded to the BLM NOI and provided information on its financial capability and renewable energy experience related to development of solar energy facilities. The response also indicated an intention to seek to amend the Calico Solar, LLC ROW grant to reflect a change in technology and a change of on-site project facilities (i.e., substation and main services complex).

Also on March 29, 2011, Calico Solar, LLC filed an SF-299–Application for Transportation and Utility Systems and Facilities on Federal Lands to amend the ROW grant and submitted an amended Plan of Development (POD).

The BLM notified Calico Solar, LLC that it had received the March 29, 2011 response and would provide a more complete response at a later date. This letter serves to document the Bureau's response and its determination that your March 29, 2011 response to our original NOI was insufficient as it relates to the request to address the technical requirements of the ROW grant and is insufficient as it relates to additional information and data necessary to proceed with the application to amend the ROW grant. This notice provides an additional 30 days for Calico Solar, LLC to respond to noncompliance with the technical capability requirements of the grant and to provide additional information.

Calico Solar, LLC's application for an amended grant requests "modification of the approved project and right-of-way grant," proposing "a new technology mix to better fit the operating, geographic and financing of the project." The amended POD includes "approximately 563 MW of photovoltaic technology" and 100.5 MW of SunCatcher technology. The amended POD also

indicates that a modification in the phasing of the project would occur. Phase 1 of the project would be located entirely south of the Burlington Northern-Santa Fe (BNSF) railroad and consist of 275 MW of entirely photovoltaic (PV) technology on approximately 2,144 acres of public lands. The original POD described Phase 1 as located primarily north of the railroad on 1,876 acres of public land. Phase 2 of the project would be north of the BNSF railroad and consist of 388 MW of PV and 100.5 MW of SunCatcher technology on approximately 2,469 acres of public lands. The original POD described Phase 2 as south of the railroad and south of Phase 1 on 2,737 acres of public lands. Additional changes to the POD include, but are not limited to: 1) the location of the Main Services Building and construction lay-down area, which moved from north of the railroad to south of the railroad, 2) the on-site substation, which moved from north of the railroad to south of the railroad adjacent to the existing Southern California Edison (SCE) substation, 3) the waterline to the Main Services Building would now require a longer waterline crossing under the railroad as a result of the movement of the Main Services Building, and 4) the bridge crossing the BNSF railroad, which moved approximately ½ mile east of its original location.

The regulations at 43 CFR 2807.20(a) address when an amendment of an application or a grant is required. A holder of a ROW grant must seek to amend a grant (and an applicant must amend an application) when there “is a proposed substantial deviation in location or use.” A substantial deviation is defined as “any change from, or modification of, the authorized use” (43 CFR 2801.5(b)). The requirements to amend “an application or grant” are the same as those for a new application (43 CFR 2807.20(b)).

#### Additional Information Required

Pursuant to the requirements of 43 CFR 2807.20(b), and in accordance with 43 CFR Subpart 2804, the following additional information is necessary to continue the processing of your application a for right-of-way grant amendment:

**Cost Recovery Account:** Calico Solar, LLC submitted funds to BLM for a cost recovery account to reimburse BLM labor costs associated with processing the original Calico Solar, LLC application (under Stirling Energy Systems). This cost recovery account a Master Agreement for Stirling for two separate applications (CACA-049537 and CACA-047740). When K Road acquired Calico Solar, LLC, the Master Agreement became invalid, and an individual cost recovery account must be established for BLM to process the amended application.

**Processing and monitoring fees:** Under 43 CFR 2804.14, an applicant is required to “pay a fee for processing your application before the Federal Government incurs them.” Fees are “based on an estimate of the amount of time that BLM will expend to process your application and issue a decision granting or denying the application.” Because the requirements for an application amendment are the same as for a new application, the BLM requires the initial payment of \$50,000.00 for the review of the amended SF-299 and POD. Therefore, the BLM requires that Calico Solar, LLC send a check in the amount of \$50,000.00, made payable to USDI/BLM, to cover BLM costs associated with reviewing the amended SF-299 and POD. Calico Solar, LLC is provided 30 days to submit a check for the cost recovery funds. Attached is a Cost Recovery Agreement to establish an individual cost recovery account. Calico Solar, LLC is provided 30

days to sign and return the Agreement to this office. After BLM signs the Agreement, a signed copy will be sent to you. Failure to comply with this request within the 30-day time period may result rejection of the application amendment and termination of the right of grant (43 CFR 2804.26).

Pursuant to the requirements under 2804.12 (c), the following additional information is necessary to complete the amended Plan of Development:

Calico Solar, LLC needs to:

1. Provide status update of the fall 2010 plant surveys on the site.
2. Provide status update for the completion of spring 2011 desert tortoise surveys on the site.
3. Submit a final Hydrology and Grading Plan.
4. Provide an agreement with BNSF railroad for temporary and permanent access across the railroad.
5. Provide details on how Calico Solar, LLC plans to operate or mitigate the project in a manner consistent with the values of the lands donated or acquired for conservation purposes.
6. Provide evidence that the SunCatcher technology is a viable and available technology for use on the project site.

Following 43 CFR 2804.25, Calico Solar, LLC is provided 30 days to submit to the BLM the requested information, or an adequate explanation as to why any of this information cannot be submitted within that period of time. Failure to comply with this request within the 30-day time period may result rejection of the application amendment and termination of the right of grant (43 CFR 2804.26, 43 CFR 2807.17-18).

Please submit this information to Jim Stobaugh, Project Manager, at the Nevada State Office BLM, Reno NV.

Sincerely,



for Teresa A. Raml  
District Manager-California Desert



**COST REIMBURSEMENT AGREEMENT  
BETWEEN  
CALICO SOLAR, LLC  
AND  
THE BUREAU OF LAND MANAGEMENT  
CALIFORNIA DESERT DISTRICT OFFICE**

**I. AUTHORITY:** Section 304(b) and 504(g) of the Federal Land Policy and Management Act (FLPMA) [43 U.S.C. 1734(b) and 1764(g)], as amended and 43 CFR Subpart 2804.

**II. PURPOSE:** This Agreement between the above referenced applicant and BLM, is for costs associated with reviewing and processing the amended application.

**III. PROVISIONS OF AGREEMENT**

A. In accordance with Section 304(b) of FLPMA and 43 CFR 2804.19, Applicant agrees to reimburse BLM for the costs incurred by BLM for processing the amended Application, and should the amended Application be approved, costs for issuing a right-of-way grant and monitoring the construction, operation, maintenance and termination of project facilities authorized by such right-of-way grant. Further, in accordance with 43 CFR 2804.14(f), Applicant waives consideration of reasonable costs, as would be determined under 43 CFR 2804.20 and 2804.21, and agrees to pay all actual costs incurred by the BLM related to this Application.

B. This Agreement is for costs associated with reviewing and processing the amended application for the Calico Solar, LLC solar development on BLM-managed lands, and review of the amended Plan of Development. The initial cost for this work is \$50,000.00. This cost estimate may be amended should actual costs exceed estimated costs.

C. Applicant will be advised when the amended application is approved and the nature and extent of all costs necessary to process the amended application and Plan of Development following the approval of the application. BLM will prepare a separate Memorandum of Understanding to which this Agreement may be attached and incorporated therein for the preparation of any required National Environmental Policy Act (NEPA) documents.

**IV. EFFECTIVE DATE:** This Agreement shall be effective *as of the latter date of its execution by both parties*. Unless terminated earlier, it shall continue so long as the right-of-way case file is active.

**V. SIGNATURES OF AGREEMENT**

For Bureau of Land Management

For Calico Solar, LLC:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Typed Name

\_\_\_\_\_  
Typed Name

Teresa A. Raml

\_\_\_\_\_  
Typed Title

\_\_\_\_\_  
Typed Title

District Manager – California Desert

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

## **Exhibit F**

# **Final Environmental Impact Statement and Proposed Amendment to the California Desert Conservation Area Plan for the Calico Solar (formerly SES Solar One) Project**

**San Bernardino County, California**



**August 2010**

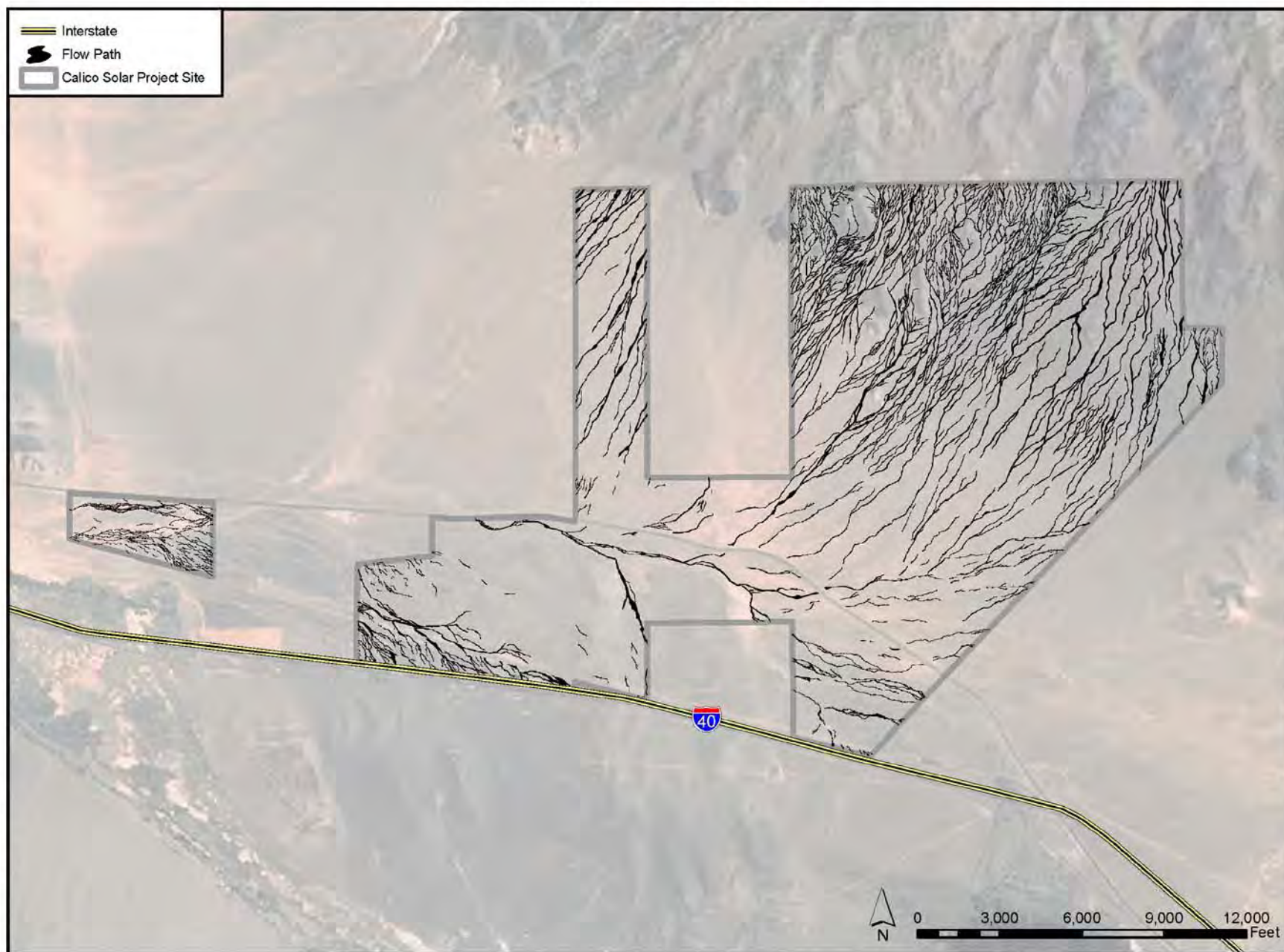




**WATER RESOURCES - FIGURE A-15**  
Calico Solar Project - Existing CDFG Flow Paths

AUGUST 2010

WATER RESOURCES



SOURCE: ESRI, URS

Alternative	Description of Alternative	Rationale for Elimination from Detailed Analysis
Solar Power Tower	<p>Solar power tower technology converts thermal energy to electricity by using heliostat (mirror) fields to focus energy on a boiler located on power tower receivers near the center of each heliostat array. The solar power towers can be up to 459 feet tall with additional 10-foot-tall lightning rods. In general, a solar power tower plant requires 5 to 10 acres of land per MW of power generated. An 850-MW solar power tower field would require from 4,250 acres to 8,500 acres of land.</p>	<p>Solar power tower technology on the project site was eliminated from detailed analysis because it would have substantially similar environmental effects to the Proposed Action. In addition, the towers are substantially taller than the SunCatchers and project features and could conflict with aviation and military activities. It would be in the Department of Defense Airspace Consultation Area for the nearby Twentynine Palms installation, and could be inconsistent with basic policy objectives for the management of this area.</p>
Linear Fresnel	<p>A solar linear Fresnel power plant converts solar radiation to electricity by using flat moving mirrors to follow the path of the sun and reflect its heat on the fixed pipe receivers located about the mirrors. During daylight hours, the solar concentrators focus heat on the receivers to produce steam, which is collected in a piping system and delivered to steam drums located in a solar field and then transferred to steam drums in a power block. The steam drums transferred to the power block will be used to turn steam turbine generators and produce electricity. The steam is then cooled, condensed into water, and re-circulated back into the process. An 850-MW solar linear Fresnel field would require nearly 4,000 acres of land.</p>	<p>The solar linear Fresnel power plant technology was eliminated from detailed analysis because it would have substantially similar environmental effects to the Proposed Action. The technology also has not been demonstrated to be feasible for utility scale power production, and implementation is therefore remote or speculative.</p>
Solar Photovoltaic (Utility-Scale)	<p>A utility-scale solar PV power generation facility would consist of PV panels that would absorb solar radiation and convert it directly to electricity. For this analysis, a utility-scale project would consist of any solar PV facilities that would require transmission to reach the load center, or center of use.</p> <p>The land requirement for PV facilities varies from approximately 3 acres per MW of capacity for crystalline silicon to more than 10 acres per MW produced for thin film and tracking technologies. An 850-MW solar PV power plant would require between 2,550 and 8,500 acres.</p> <p>Utility-scale solar PV installations require land with less than a 3 percent slope. Solar PVs only require water for only for washing the solar PV arrays.</p>	<p>The utility-scale solar PV technology was eliminated from detailed analysis because it would require the entire site to be graded. This would result in a greater effect on biological and cultural resources than the Calico Solar Project, which would not require grading the entire site. It would therefore have greater environmental effects than the Proposed Action.</p>